

S A K E T   S H A R M A

# 70 % SYLLABUS

UGC NET/ JRF VERSION 1.8



THIS E-BOOK IS SPECIALLY CRAFTED FOR UGC NET/JRF ASPIRANTS BUT IS ALSO BENEFICIAL FOR CANDIDATES PREPARING FOR OTHER COMPETITIVE EXAMS IN THE LIBRARY PROFESSION, SUCH AS: ISRO, BHU, DELHI UNIVERSITY, NVS, KVS, DRDO, ICSSR, NISER, IIM, IIT, NIT, IIIT ETC

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### About this E-book:

This e-book is specially crafted for UGC NET/JRF aspirants but is also beneficial for candidates preparing for other competitive exams in the library profession, such as:

- ISRO
- BHU
- Delhi University
- NVS
- KVS
- DRDO

### Achievements of the Telegram Channel - UGC NET December 2024 Results:

Some incredible milestones from our community! After analyzing the polls, I am overjoyed with the results:

- *JRF Achievers: 24 members secured the prestigious Junior Research Fellowship (JRF)*
- *NET Qualifiers: 68 members cracked the Assistant Professor (NET) cutoff*
- *PhD Cutoff Achievers: 69 members successfully reached the PhD cutoff – your hard work and determination are truly inspiring!*

**Note:** This e-book is version 1.8 release and may undergo future updates. Stay informed about new versions and additional resources that may be available to further aid your preparation.

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## **DEVELOPMENT IN LIBRARIES (UNITED KINGDOM)**

- 1st Library act National Level in the world- 14 August 1850
- Public Library and Museum Act-1964
- UGC-UK (Parry Committee Report)-1964

### **Various Reports**

- Adams Report-1915
- Mitchell & Kenyon Report-1924
- Mc Colvin Report-1942
- Robert Report-1959

## **DEVELOPMENT IN LIBRARIES (UNITED STATES OF AMERICA)**

- Pioneer of Social Libraries- Benjamin Franklin
- Boston Public Library Act-1848
- 1st General library Law-1956
- Library of Congress-1800
- Library of Congress Shared Cataloguing service-1901

### **National Libraries of the worlds**

- State Lenin Library, Moscow 1862
- National Library of India- 1835
- Bibliothec Nationale, Paris (National Library, France) 1440
- National Diet Library, Japan 1948
- National Library, Germany 1912
- Library of Congress, USA 1800

## **LIBRARY ASSOCIATIONS WORLD AND INDIA**

- Library Association (UK)-1877 now Known as Chartered institute of Library and Information Professionals (From 2002) 1877 (now name changed in 2002 as CILIP)
- American Library Association- 1876
- Association of Special Libraries and Information Beureaux -ASLIB 1924 (The organization ceased functioning as an independent organization in 2010, when it became a division of Emerald Group Publishing. Since 2015, ASLIB has existed only as Emerald's professional development arm)
- IFLA-1927
- UBC-1974, UAP-1976
- Special Library Association (SLA) 1909
- Peter Larzer Committee Report (1972)
- FID 1895(as the International Institute of Bibliography (originally Institut International de Bibliographie, or IIB) by two Belgian lawyers, Paul Otlet (1868–1944) and Henri La Fontaine (1854–1943). It was popularly known as the Brussels Institute. Its headquarters was changed to The Hague after 1934. It had gone through a number of changes in name that reflect changes of conceptualization of the field in which it operates.The changes in names and years are :
- 1931 – The International Institute for Documentation (Institut International de Documentation, IID)
- 1937 – The International Federation for Documentation (Fédération Internationale de Documentation, FID)

- 1988 – The International Federation for Information and Documentation (Fédération Internationale d'Information et de Documentation, FID) The Institute was one of the sponsors of the first World Congress of Universal Documentation, held in Paris in 1937. FID was dissolved in 2002.
- UNESCO 1945
- India Library Association 1933
- IASLIC 1955
- RRRLF 1972

### **UNESCO CONTRIBUTIONS (LIBRARY NETWORKS)**

- Asia and Pacific Information Network (APIN) Founded in 13 December 2002 at Bangkok Thailand
- Information Society program for Latin America and The Caribbean (INFOLAC) - 1986 at Santiago Chile with Promote exchange of expertise and experiences for the development of the Information Society in Latin America and the Caribbean.
- Global Network for Education in Journalism-1999
- Orbicom 1994 ( Orbicom, a global academic network founded in 1994 by UNESCO and UQAM, connects academics and media professionals to advance communication research, democracy, and sustainable development.)
- UNESCO Network for Associated Library (UNAL)- The UNESCO Network of Associated Libraries (UNAL), founded in 1990 in Paris, unites libraries worldwide to foster international understanding, cultural dialogue, literacy, and UNESCO's core missions.
- UNISIST Programme 1971

### **LIBRARIES & LIS TRAINING IN INDIA**

#### ***Imperial Library History***

- Formed in 1891 by combining Secretariat libraries in Calcutta.
- Originally used by superior government officers.
- Sir Ashutosh Mukherjee donated his personal collection of 80,000 books.

#### ***National Library of India Overview***

- Located in Belvedere Estate, Alipore, Kolkata, India.
- India's largest library by volume and public record. ☞ Under Ministry of Culture, Government of India.

#### ***National Library Opening***

- Officially opened on 1 February 1953.
- Name changed to National Library by Imperial Library (Change of Name) Act, 1948.
- Collection transferred to Belvedere Estate. ☞ Opened to the public on 1 February 1953.

#### ***Others***

- Delhi Public Library- 1951
- DRTC, Located at Bangalore -1962
- Raja Ram Mohan Roy Library Foundation -1972 (A central autonomous organization under the Ministry of Culture, Govt. of India; registered under the West Bengal Societies Registration Act, 1961; serves as the nodal agency for public library development; governed by a 22-member Foundation; works with State Library Planning Committees; collaborates with Nehru Yuva Kendra Sangathan for District Youth Resource Centers since 2005-06.)

- Connemara Public Library -1896 (One of four National Depository Libraries, a UN depository, became State Central Library in 1948, and expanded in 1973.)
- Khuda Baksh Oriental Public Library, Patna -1891– Institute of National Importance fully funded by the Ministry of Culture, Govt. of India.
- Asiatic Society of Mumbai: Originated from Literary Society of Bombay, First meeting in Mumbai on 26 November 1804, Founded by Sir James Mackintosh.
- Bhandarkar Oriental Research Institute, Pune -1917
- Rampur Raza Library, Uttar Pradesh -1774, Founded by Nawab Faizullah Khan
- Sarasvati Mahal Library- 1918 (Became public Library)
- National Medical Library, New Delhi 1947 (became NML on 1st April 1966.)

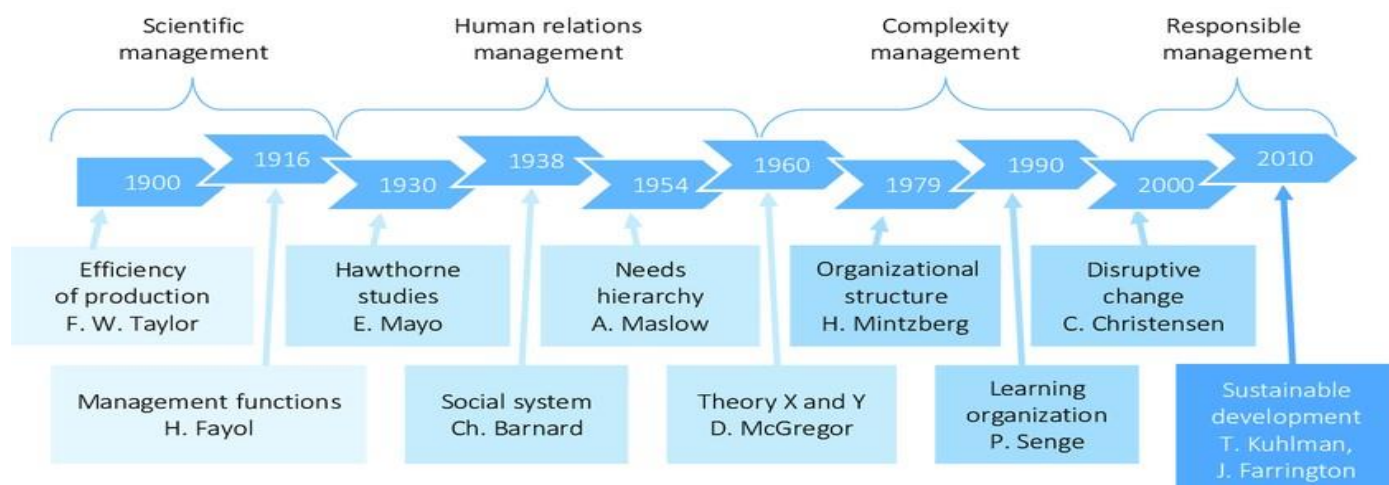
### **COMMITTEES ON LIS EDUCATION IN INDIA**

<b>Committee/Commission</b>	<b>Year</b>	<b>Chairperson</b>
Hunter Commission	1882	Presided by Sir William Hunter and was appointed by Lord Ripon, the then-viceroy of India.
Indian University Commission	1902	A body appointed in 1902 on the instructions of Viceroy of India Lord Curzon intended to make recommendations for reforms in university education in India.
Saddler Commission	1917	The Sadler Commission, also known as the Calcutta University Commission, was established in 1917 by the Indian government to investigate the state of Calcutta University and recommend reform. chairmanship of Leeds University's vice-chancellor, M.E. Saddler.
Radhakrishnan Committee	1948	Chairmanship of Dr. Sarvapalli Radhakrishnan, a distinguished scholar and former vice chancellor of Banaras Hindu University and who then became the second President of India
Secondary Education Commission	1953	Dr. Lakshmana Swamy Mudaliar
University Grants Commission	1953	<b>Important Dates and Years in the Development of Higher Education in India</b> <ul style="list-style-type: none"> <li>• <b>1857</b> – Establishment of the first three universities: <b>Calcutta, Bombay (now Mumbai), and Madras.</b></li> <li>• <b>1887</b> – University of <b>Allahabad</b> founded.</li> <li>• <b>1925</b> – Inter-University Board (now Association of Indian Universities) was established.</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>1944</b> – Sargeant Report recommended a national education system and the University Grants Committee.</li> <li>• <b>1945</b> – University Grants Committee formed for Central Universities.</li> <li>• <b>1947</b> – Committee’s role expanded to include all universities.</li> <li>• <b>1948</b> – University Education Commission under <b>Dr. S. Radhakrishnan</b> set up.</li> <li>• <b>1952</b> – Union Government linked university funding decisions to the University Grants Committee.</li> <li>• <b>28 December 1953</b> – Formal <b>inauguration of the University Grants Commission (UGC)</b> by <b>Maulana Abul Kalam Azad</b>.</li> <li>• <b>November 1956</b> – UGC became a <b>statutory body</b> through an Act of Parliament.</li> </ul>
Ranganathan Committee on University and College Libraries	1957	Dr. S.R. Ranganathan
Advisory Committee for Libraries (K.P. Sinha Committee)	1957	Shri K.P. Sinha
Library Committee (UGC)	1957	Dr. S.R. Ranganathan
Ranganathan Committee on LIS Education	1961	Dr. S.R. Ranganathan
Review Committee on Library Science Education (UGC)	1965	Dr. S.R. Ranganathan
Kothari Commission	1964	D.S. Kothari
National Policy on Library and Information System (CONPOLIS)	1986	Prof. D.P. Chattopadhyay
Mehrotra Committee	1983	R.C. Mehrotra
Committee on setting up of National Network in University Libraries	1988	Prof. Yash Pal
Curriculum Development Committee in LIS	1990	Prof. P.N. Kaula
Curriculum Development Committee in LIS	1997	Dr. C.R. Karisiddappa
National Knowledge Commission	2005	Sam Pitroda
National Mission on Libraries	2012	Prof. Deepak Pental
<b>National Education Policy</b>	29/07/2020	Former Indian Space Research Organization (ISRO) chief Krishnaswamy Kasturirangan

## THEORIES OF MANAGEMENT AND FOUNDERS

Theories	Founders
Principles of Scientific Management / Father of Scientific Management	F.W. Taylor
Functional Management (Command and control)/ Classical Theory, Father of Administration	Henri Fayol
Sociological Perspective / Father of Human Relation School The human relations approach is also known as New Classical approach. Elton Mayo termed it Clinical approach. It attempts to explain the informal relations among employers and employees are concerned with moral and psychological rather than legal aspects of an organization. The approach considers worker not only one of the means of production system but as a man	Elton Mayo
<b>Theory X and Theory Y:1960 – Douglas McGregor</b> , an American social psychologist, introduced <b>Theory X and Theory Y</b> in his influential book “ <i>The Human Side of Enterprise</i> ”. <ul style="list-style-type: none"> <li><b>Theory X</b> assumes that people are inherently lazy, need close supervision, and must be coerced to work.</li> <li><b>Theory Y</b> suggests that people are self-motivated, enjoy responsibility, and can be creative if given the right conditions.</li> </ul>	D.M. Mc Gregor
Motivation —Hygiene Approach / Father of Corporate Strategy	F. Herzberg
Hierarchy of Needs Theory/ Motivational theory	Abraham Maslow
Bureaucratic organization	Max Weber
Management as a discipline	Peter Drucker
POSDCORB	Luther Gulick



Source: [https://www.researchgate.net/figure/Evolution-of-management-theories\\_fig1\\_361067074](https://www.researchgate.net/figure/Evolution-of-management-theories_fig1_361067074)

## HISTORICAL DEVELOPMENT OF NORMATIVE PRINCIPLES IN CATALOGUING

Formulation	Year	Key Canons/Principles	Notes
<b>Formulation 1</b>	1938	1. Canon of Consistency 2. Canon of Relevance	Introduced in <i>Theory of Library Catalogue</i> .

		3. Canon of Ascertainability 4. Canon of Permanence 5. Canon of Currency 6. Canon of Prepotence	Included the <i>Law of Parsimony</i> as a guiding principle.
<b>Formulation 2</b>	1955	7. Canon of Context 8. Canon of Purity	Added in <i>Heading and Canon</i> (1955). Canon of Relevance was renamed as <i>Canon of Sought Heading</i> .
<b>Formulation 3</b>	1964	General Laws: 1. Law of Interpretation 2. Law of Impartiality 3. Law of Symmetry 4. Law of Parsimony 5. Principle of Local Variation 6. Principle of Osmosis	Published in <i>Classified Catalogue Code</i> , Ed. 5. <i>Canon of Purity</i> was omitted. <i>Canon of Individualization</i> was added.
<b>Formulation 4</b>	1969	1. Canon of Recall Value 2. Principle of Unity of Idea 3. Principle of Probability	Published in <i>Library Science with a Slant to Documentation</i> (December 1969). Added new principles and canon.

### S.R. Ranganathan's contributions to Library Classification

Concept	Description
<b>Revolutionizing Library Classification</b>	S.R. Ranganathan revolutionized the theory of classification by proposing laws, canons, and principles for classification based on facet analysis and fundamental categories.
<b>Prolegomena to Library Classification</b>	This seminal work by Ranganathan presents his laws, canons, and principles, forming the foundation of modern library classification.
<b>Mapping of Universe of Knowledge</b>	Ranganathan addressed the challenge of mapping the multi-dimensional universe of knowledge into a unidimensional classification system.
<b>General Theory of Classification</b>	Ranganathan developed this theory based on basic laws, laws of library science, canons, principles, and postulates to successfully represent the universe of knowledge.

#### Basic Laws

Ranganathan formulated six basic laws that guide thinking processes in classification:

1) <b>Law of Interpretation</b>	Guides the interpretation of subjects in classification.
2) <b>Law of Impartiality</b>	Ensures objectivity in classification.
3) <b>Law of Symmetry</b>	Emphasizes consistency in classification schemes.
4) <b>Law of Parsimony</b>	Advocates for simplicity in classification, avoiding unnecessary complexity.
5) <b>Law of Local Variation</b>	Allows for variations based on local needs and conditions.
6) <b>Law of Osmosis</b>	Reflects the permeation of ideas across different areas of knowledge.

#### Laws of Library Science

Ranganathan's five laws, formulated in 1928, have had a profound impact on library practices:

1) <b>Books are for use</b>	Books should be accessible and usable.
2) <b>Every reader his/her book</b>	Every reader should find a book suited to their needs.

3) Every book its reader	Every book should be found by the right reader.
4) Save the time of the reader	Libraries should facilitate quick access to books and information.
5) A library is a growing organism	Libraries evolve over time, adapting to changing needs.
<b>Postulates for Facets</b> Ranganathan's key contribution was the formulation of postulates related to facet analysis and fundamental categories in classification.	
<b>Fundamental Categories (PMEST)</b>	Ranganathan identified five fundamental categories for classification: Time, Space, Energy, Matter, Personality.
<b>Facet Sequence</b>	The fundamental categories are arranged in decreasing order of concreteness as: <b>PMEST</b> (Personality, Matter, Energy, Space, Time).
<b>Rounds of 'Energy'</b>	Energy can manifest multiple times in a subject, and these manifestations are called rounds.
<b>General Theory of Levels</b>	Personality and Matter may appear multiple times in a subject, and the first manifestation is its level 1 facet.
<b>Principles of Facet Sequence</b> Four guiding principles for arranging facets in a classification scheme:	
1) Wall-Picture Principle	Arranges facets based on their visual representation.
2) Whole-Organ Principle	Suggests that a whole entity should be treated as a single unit before breaking it down into parts.
3) Cow-Calf Principle	Specifies that one facet should lead to a dependent facet.
4) Act and Action-Actor-Tool Principle	Defines the relationship between an action, its actor, and the tool used in performing the action.

**Canons of Classification:** Ranganathan provided a completely new direction to' the concept of classification originally formulated by Sayers. Ranganathan formulated 43 canons and grouped them into three planes of work.

- i) Canons for Idea Plane (15).
- ii) Canons for Verbal Plane (4).
- iii) Canons for Notational Plane (24).

### CANONS OF CLASSIFICATION AS FORMULATED BY RANGANATHAN, GROUPED INTO THREE PLANES OF WORK

Plane of Work	Canon Category	Canon	Description
Idea Plane	Canons for Characteristics	1) Canon of Differentiation	Characteristics selected for division should be easily differentiated.
		2) Canon of Ascertainability	Characteristics must be ascertainable.
		3) Canon of Relevance	Characteristics must be relevant.
		4) Canon of Permanence	Characteristics should be permanent.

	<b>Canons for Succession of Characteristics</b>	<b>5) Canon of Sequence</b>	Sequence in which characteristics are to be applied.
		<b>6) Canon of Hierarchy</b>	Hierarchy or sequence of characteristics during the process of knowledge division.
		<b>7) Canon of Application</b>	Application of more than one characteristic in a defined order.
	<b>Canons for Array</b>	<b>8) Canon of Exhaustiveness</b>	The classes in an array should be collectively exhaustive.
		<b>9) Canon of Mutual Exclusiveness</b>	Classes should be mutually exclusive.
		<b>10) Canon of Helpful Sequence</b>	Sequence among the array classes should be helpful and consistent.
		<b>11) Canon of Consistency</b>	The sequence should remain consistent throughout the classification.
	<b>Canons for Chain</b>	<b>12) Canon of General to Specific</b>	Division from general to specific in subordinate classes.
		<b>13) Canon of Regulation</b>	The division should be properly regulated.
	<b>Canons for Filiatory Sequence</b>	<b>14) Canon of Affiliation</b>	Clearly identify both coordinate and subordinate classes in filiatory sequence.
		<b>15) Canon of Sequence of Affiliation</b>	Classes should be arranged according to their mutual affiliation.
<b>Verbal Plane</b>	<b>Canons for Terminology</b>	<b>16) Canon of Context</b>	Terms used must clearly indicate the context.
		<b>17) Canon of Enumeration</b>	Terms should denote concepts in a structured manner.
		<b>18) Canon of Currency</b>	Terms used should be current.
		<b>19) Canon of Reticence</b>	Avoid unnecessary or excessive use of terminology.
<b>Notational Plane</b>	<b>Basic Canons</b>	<b>20) Canon of Simplicity</b>	Notations should be simple and clear.
		<b>21) Canon of Precision</b>	Notations should precisely represent the concepts.

		<b>22) Canon of Continuity</b>	Notation system should ensure continuity.
		<b>23) Canon of Flexibility</b>	Notations should allow for flexibility in use and expansion.
		<b>24) Canon of Universality</b>	Notations should be universally applicable.
	<b>Mnemonics</b>	<b>25) Canon of Memorability</b>	Notations should be easy to remember.
		<b>26) Canon of Aesthetic Appeal</b>	Notations should be aesthetically appealing.
		<b>27) Canon of Uniqueness</b>	Notations should be unique for each concept.
		<b>28) Canon of Economical Representation</b>	Notations should represent concepts economically (with fewer symbols).
		<b>29) Canon of Suitability</b>	Notations should be suitable for all contexts.
	<b>Growing Universe</b>	<b>30) Canon of Expansibility</b>	Notations should accommodate expansion.
		<b>31) Canon of Growing Classification</b>	Notation should allow for future growth of the classification scheme.
		<b>32) Canon of Development</b>	Notation should support the development of the classification system over time.
		<b>33) Canon of Diversity</b>	Notations should allow for diverse forms and classes.
	<b>Book Classification</b>	<b>34) Canon of Consistency in Notation</b>	Notations in book classification should remain consistent.
		<b>35) Canon of Clear Identification</b>	Notations should clearly identify the subject matter.
		<b>36) Canon of Class Differentiation</b>	Notations should clearly differentiate between classes in book classification.

### Principles of Helpful Sequence as formulated by Ranganathan

Principle Category	Principle	Description
1. Principle of Later-in-Time	<i>Principle of Later-in-Time</i>	Entities are arranged in the order of their occurrence in time.

2. Principle of Later-in-Evolution	<i>Principle of Later-in-Evolution</i>	Entities are arranged based on their evolutionary development.
3. Principle of Spatial Contiguity	<i>Principle of Spatial Contiguity</i>	Entities should be arranged to reflect their spatial relationships.
3.1 Principles for Entities along a Vertical Line	<i>Principle of Bottom Upwards</i>	Entities along a vertical line are arranged from bottom to top.
	<i>Principle of Top Downwards</i>	Entities along a vertical line are arranged from top to bottom.
3.2 Principles for Entities along a Horizontal Line	<i>Principle of Left to Right</i>	Entities along a horizontal line are arranged from left to right.
	<i>Principle of Right to Left</i>	Entities along a horizontal line are arranged from right to left.
3.3 Principles of Entities along a Circular Line	<i>Principle of Clockwise Direction</i>	Entities along a circular line are arranged in a clockwise direction.
	<i>Principle of Counter-Clockwise Direction</i>	Entities along a circular line are arranged in a counterclockwise direction.
3.4 Principles for Entities along a Radial Line	<i>Principle of Centre to Periphery</i>	Entities along a radial line are arranged from the center towards the periphery.
	<i>Principle of Periphery to Centre</i>	Entities along a radial line are arranged from the periphery towards the center.
4. Principle of Away-from-Position	<i>Principle of Away-from-Position</i>	Entities are arranged based on their distance from a central or starting position.
5. Principle for Quantitative Measure	<i>Principle of Increasing Quantity</i>	Entities are arranged in increasing order of quantity.
	<i>Principle of Decreasing Quantity</i>	Entities are arranged in decreasing order of quantity.
6. Principle of Increasing Complexity	<i>Principle of Increasing Complexity</i>	Entities are arranged in increasing order of complexity.
7. Principle of Canonical Sequence	<i>Principle of Canonical Sequence</i>	Entities are arranged in a standard or accepted order.
8. Principle of Literary Warrant	<i>Principle of Literary Warrant</i>	Entities are arranged based on their literary or conceptual support for being together in the sequence.
9. Principle of Alphabetical Sequence	<i>Principle of Alphabetical Sequence</i>	Entities are arranged in alphabetical order.

## DESCRIPTIVE THEORY IN LIBRARY CLASSIFICATION

Contributor	Contribution & Key Principles
<b>Descriptive Theory</b>	First stage in library classification; based on practices of existing schemes before the 1950s, with designers relying on natural skill rather than objective theories. Key contributors: Brown, Richardson, Hulme, Sayers, Bliss, and Ranganathan.

<b>J.D. Brown</b>	Introduced multiple schemes; known primarily for the "Subject Classification" (1906). Proposed the "One Place Theory" (each subject has only one place) and "Science and Applications Theory" (placing subjects near their source science). His subject-based, non-disciplinary approach was an experiment that ultimately didn't succeed.
<b>E.C. Richardson</b>	First librarian to systematize library classification theories in "Classification, Theoretical and Practical" (1910). Proposed "Criteria of Classification" which include historical order, detailed division, likeness, and unlikeness grouping, use-driven classification, and a flexible notation system.
<b>E.W. Hulme</b>	Divided classifications into "Mechanical" and "Philosophical." Emphasized "Literary Warrant" (inclusion of subjects only if literature exists). Influenced later classification systems like the Library of Congress Classification.
<b>W.C.B. Sayers</b>	Developed "Canons of Classification" (29 principles across six categories), focusing on systematic organization and clear definitions in classification. He emphasized terms being unambiguous and consistent. His principles helped shape future classification scheme designs.
<b>H.E. Bliss</b>	Advanced the scientific, philosophical, and logical foundations for bibliographic classification in "Organization of Knowledge and the System of Science" (1929), contributing major theoretical underpinnings for library science.

#### NATIONAL AND INTERNATIONAL INSTITUTIONS WITH ESTABLISHMENT YEAR

<b>Organization</b>	<b>Year</b>	<b>Additional Information</b>
CSIR — Council of Scientific and Industrial Research	1942	CSIR was established in September 1942.
FAO - Food and Agriculture Organisation	1945	FAO was founded on 16 October 1945.
UNESCO - United Nations Educational Scientific Cultural Organization	1945	UNESCO was founded in 1945.
UGC - University Grants Commission	1953	UGC came into existence on 28 December 1953 and became a statutory Organization of the Government of India by an Act of Parliament in 1956.
IAEA - International Atomic Energy Agency	1957	IAEA was created in 1957.
ICSSR - Indian Council For Social Science Research	1969	ICSSR was established in 1969.
WIPO - World Intellectual Property Organization	1970	WIPO was formally created by the Convention Establishing the World Intellectual Property Organization, which entered into force on 26 April 1970.

UNISIST - United Nations International Scientific Information System	1971	The UNISIST model of information dissemination was proposed in 1971 by the United Nations.
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### **BOOKS AND AUTHORS**

<b>Title</b>	<b>Author</b>
Elements of Library Classification	S.R. Ranganathan
Library Administration Theory and Practice	R.L. Mithal
Cataloguing Theory and Practice	C.G. Viswanathan
Rules for Dictionary Catalogue	C.A. Cutter
Little Science Big Science	D.J. Desolla Price
Documentation	S.C. Bradford
Subject Approach to Information	D.J. Foskett
Manual of Library Economy	N.R. Look
Documentation and its Facets	S.R. Ranganathan
Manual of Cataloguing Practice	C.G. Viswanathan

### **LIBRARY LEGISLATION WITH YEAR**

<b>S. No.</b>	<b>State</b>	<b>Act Year</b>
1	Tamilnadu	1948
2	Andhra Pradesh	1960
3	Karnataka	1965
4	Maharashtra	1967
5	West Bengal	1979
6	Manipur	1988
7	Haryana	1989
8	Kerala	1989
9	Mizoram	1993
10	Goa	1993
11	Gujarat	2001
12	Odisha	2001
13	Uttarakhand	2005
14	Rajasthan	2006
15	Uttar Pradesh	2006
16	Bihar	2008
17	Chhattisgarh	2008
18	Arunachal Pradesh	2009
19	Telangana	2015

### **CLASSIFICATION SCHEMES**

<b>S. N.</b>	<b>Classification Schemes</b>	<b>Founder</b>	<b>Year</b>
1	Dewey Decimal Classification (DDC)	Melvil Dewey	1876

2	Colon Classification (CC)	S.R. Ranganathan	1933
3	Universal Decimal Classification (UDC)	FID	1905
4	Library of Congress Classification	Library of Congress	1904
5	Subject Classification (SC)	J.D. Brown	1906
6	Expansive Classification (EC)	Cutter C.A.	1879/1891
7	Bibliographic Classification (BC)	Bliss H.E.	1935
8	International Classification (IC)	F. Rider	1961
9	Library Bibliographic Classification (LBK)	Lenin Library Moscow	1959
10	Broad System of Ordering (BSO)	FID/Unesco	1978

## **HISTORY OF CATALOGUING RULES**

### **History of Library Catalogs: Key Points**

- 2500 BCE: Earliest evidence of categorization in clay tablets from Mesopotamia.
- 7th century BCE: Assyrian library uses a classification system.
- 3rd century BCE: Library of Alexandria has a partial catalog ("Pinakes").
- 3rd century AD: Chinese Imperial Library has a catalog listing 30,000 items.
- 11th century: First Islamic library catalogs list donated books by donor.
- 14th century: Vatican Library creates first catalog using topical arrangement.
- 1290: Sorbonne library pioneers' alphabetical organization.
- 700 BCE: Assyrians follow cataloging rules established by Babylonians.
- 7th century BCE: Babylonian Library of Ashurbanipal led by librarian Ibnissaru implements subject-based cataloging.
- 1290: Sorbonne library in Paris becomes the first to alphabetically list titles under subjects.
- 1780: Gottfried van Swieten introduces the world's first card catalog as Prefect of the Imperial Library, Austria
- Seventh century BCE, the royal Library of Ashurbanipal at Nineveh had 30,000 clay tablets, in several languages, organized according to shape and separated by content. Assurbanipal sent scribes to transcribe works in other libraries within the kingdom.
- Third century BCE, Pinakes by Callimachus at the Library of Alexandria was arguably the first library catalog.
- 9th century: Libraries of Carolingian Schools and monasteries employ library catalog system to organize and loan out books.
- 10th century: The Persian city of Shiraz's library had over 300 rooms and thorough catalogs to help locate texts these were kept in the storage chambers of the library, and they covered every topic imaginable.
- 1246: Library at Amiens Cathedral in France uses call numbers associated with the location of books.
- 1542–1605: The Mughal emperor Akbar was a warrior, sportsman, and famous cataloger. He organized a catalog of the Imperial Library's 24,000 texts, and he did most of the classifying himself.
- 1595: Nomenclator of Leiden University Library appears, the first printed catalog of an institutional library.

- Renaissance Era: In Paris, France the Sorbonne Library was one of the first libraries to list titles alphabetically based on the subject they happened to fall under. This became a new organization method for catalogs.
- Early 1600s: Sir Thomas Bodley divided cataloging into three different categories. History, poesy, and philosophy.
- 1674: Thomas Hyde's catalog for the Bodleian Library.
- 1791: The French Cataloging Code of 1791
- 1815: Thomas Jefferson sells his personal library to the US government to establish the Library of Congress. He had organized his library by adapting Francis Bacon's organization of knowledge, specifically using Memory, Reason, and Imagination as his three areas, which were then broken down into 44 subdivisions.
- 1874/1886: Breslauer Instructionen (English: Wroclaw instructions) by Karl Dziatzko
- 1899: Preußische Instruktionen (PI) (English: Prussian instructions) for scientific libraries in Germanspeaking countries and beyond
- 1932: DIN 1505
- 1938: Berliner Anweisungen (BA) (English: Berlin instructions) for public libraries in Germany
- 1961: Paris Principles (PP), internationally agreed upon principles for cataloging
- 1967: Anglo-American Cataloguing Rules (AACR)
- 1971: International Standard Bibliographic Description (ISBD)
- 1976/1977: Regeln für die alphabetische Katalogisierung (RAK) (English: Rules for alphabetical cataloging) in Germany and Austria.

### **TYPES OF CATALOGUES**

- **Author Catalog:** Alphabetically sorted catalog based on names of authors, editors, illustrators, etc.  
Example: A catalog listing books by J.K. Rowling, Stephen King, and Jane Austen, sorted alphabetically by their last names.
- **Subject Catalog:** Catalog organized by subject matter.  
Example: A catalog grouping books about "World War II," "Biographies," and "Computer Science" together for easy access.
- **Title Catalog:** Alphabetically arranged catalog based on the titles of entries.  
Example: A catalog listing books such as "To Kill a Mockingbird," "The Great Gatsby," and "Harry Potter and the Sorcerer's Stone" in alphabetical order by title.
- **Dictionary Catalog:** All entries (author, title, subject, series) interfiled in a single alphabetical order, common in North American libraries before computer-based catalogs.  
Example: A catalog where entries for books like "1984" by George Orwell, "Animal Farm" by George Orwell, and "Orwell: The Authorized Biography" by Michael Shelden are all listed in one alphabetical order.
- **Keyword Catalog:** Subject catalog sorted alphabetically by keywords.  
Example: A catalog where books on "Environmentalism," "Climate Change," and "Sustainability" are arranged alphabetically by keywords associated with each topic.
- **Mixed Alphabetic Catalog Forms:** Combination catalogs such as author/title or author/title/keyword.

Example: A catalog combining author/title, where books by J.R.R. Tolkien are listed under "Tolkien, J.R.R." with titles like "The Hobbit" and "The Lord of the Rings."

- **Systematic Catalog:** Subject catalog sorted by systematic subdivision of subjects, also known as a Classified catalog.

Example: A catalog sorting books on "Biology," "Chemistry," and "Physics" into systematic subdivisions within the science section.

- **Shelf List Catalog:** Formal catalog with entries arranged in the same order as items are shelved, often serving as the primary inventory for the library.

Example: A catalog mirroring the physical arrangement of books on library shelves, where entries correspond to the order in which books are placed on shelves.

## HISTORY OF ISBD PUBLICATIONS WITH YEARS

- **1969:** IFLA Committee on Cataloguing sponsors an International Meeting of Cataloguing Experts, proposing the creation of standards for bibliographic descriptions.
- **1971:** International Standard Bibliographic Description for Monographic Publications (ISBD(M)) is published.
- **1973:** ISBD(M) is adopted by several national bibliographies and utilized by cataloguing committees for drafting rules.
- **1974:**
- Revised edition of ISBD(M), known as the "First standard edition," is published due to user feedback. International Standard Bibliographic Description for Serials (ISBD(S)) is published.
- **1975:** Joint Steering Committee for Revision of the Anglo-American Cataloguing Rules proposes the development of a general international standard bibliographic description for all types of library materials.
- **1977:** International Standard Bibliographic Description for General Materials (ISBD(G)) is published.
- **1978:** ISBD(M) is revised to align with ISBD(G), resulting in the publication of the "First standard edition revised."
- **1977:** ISBDs for specific materials are published: ISBD(CM) for cartographic materials, ISBD(NBM) for non-book materials, and a revised ISBD(S) for serials.

### Important decisions regarding the ISBD program are made at the IFLA World Congress in Brussels.

- **1980:** ISBD(A) for older monographic publications and ISBD(PM) for printed music are published.
- **1981:** ISBD Review Committee is formed to plan for reviewing and revising the ISBDs.
- **1987:** ISBD(M), ISBD(CM), and ISBD(NBM) are republished.
- **1990:** ISBD(CF) for computer files is published, later becoming ISBD(ER) for electronic resources in 1997.
- **1992:** Study Group on the Functional Requirements for Bibliographic Records (FRBR) is set up by the IFLA Section on Cataloguing.
- **2002:** ISBD(S) revised to ISBD(CR) for serials and other continuing resources, harmonized with ISSN guidelines and AACR2. Revised editions of ISBD(M) and ISBD(G) are published.
- **2003:** Study Group on Future Directions of the ISBDs formed at the Berlin IFLA Conference. Decision made to consolidate all ISBDs into a single text for ease of use and consistency.
- **2004:** Revised edition of ISBD(G) is published.
- **2006:** Revision process for ISBD(A) takes place.

- **2007:** A preliminary consolidated edition of ISBD is established, collocating related provisions from each ISBD into a new structure. Changes made to prescribed punctuation to improve interoperability between bibliographic retrieval systems and display formats.

**2011 Consolidated Version:**

- ISBD Review Group shifts focus to maintaining the consolidated edition, which supersedes individual ISBDs, considering changes in national and multinational cataloguing codes.
- Concerns raised about the confusing mix of physical format, class of material, form of carrier, and notation within GMD terms.
- Proposal drafted for a content/carrier component for ISBD, influenced by RDA/ONIX Framework and subsequent drafts of RDA: Resource Description & Access.
- Documents such as version 1.0 of the RDA/ONIX Framework for Resource Categorization (August 2006) are instrumental in shaping the work of the study group.

**2021: Consolidated Version of ISBD: Update of 2011 Consolidated Version**

- Ten years after the publication of the ISBD Consolidated Edition of 2011, the ISBD Review Group initiates a revision of the ISBD Standard to address various pressing goals.

Source: <https://www.ifla.org/g/isbd-rg/isbd-editions/>

## INDEXING SYSTEMS/ ORIGINATORS AND YEARS

Indexing System	Inventor	Year
Citation Indexing	A. Garfield	1955
Subject Indexing	M.E. Sears	1923
Automated Indexing	H. Ohlman	1957
SLIC Indexing	J.R. Sharma	1966
Thesaurus Indexing	P.M. Rogget	29 April 1852
Systematic indexing	Kaiser, J.	1911
Chain Indexing	Dr. S.R. Rangnathan	1934
Uniterm Indexing	M. Taube	1953
Key Word Indexing	H.P. Luhn	1959
PREserved Context Indexing System	Derik Austin	1974
Postulate Based Permuted Subject Indexing (POPSI)	G. Bhattacharya	1969
COMPASS	BNB	1991

## MAJOR CITATION INDEX CONTRIBUTION BY EUGENE GARFIELD

Year	Event Description
1955	Eugene Garfield introduces the concept of citation indexing for the sciences.
1960	ISI (Institute for Scientific Information) is founded.
1964	ISI produces the first Science Citation Index (SCI)
1973	Social Sciences Citation Index (SSCI) <sup>TM</sup> is introduced
1976	Journal Citation Reports <sup>TM</sup> is introduced, collating journal-to-journal citations
1978	Arts & Humanities Citation Index (AHCI) <sup>TM</sup> is introduced.
1960	ISI introduces Index Chemicus, its first offering focusing on the chemical sciences.

1976	Journal Citation Reports™ includes indicators such as the Journal Impact Factor™.
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### PRE-COORDINATE INDEXING

Indexing System	Inventor	Year
Kaiser's Systematic Indexing	Kaiser, J.	1911
Chain Indexing	Dr. S.R. Rangnathan	1934
Relational Indexing	J.E.L. Farradane	1950
Coats Subject Indexing	E.J. Coats	1963
PRECIS	Derek Austin	1974
POPSI	G. Bhattacharya	1969

### LIST OF POST-COORDINATE INDEXING SYSTEMS

#### List of Post-Coordinate Indexing Systems

- UNITERM
- Optical Coincidence Card / Peek-a-boo
- Edge-Notched Card
- Post-Coordinate Searching Devices

### YEAR OF PUBLICATION: INDEX

Indexing System	Year of Publication
Science Citation Index	1964
Social Science Citation Index	1973
Arts & Humanities Citation Index	1978

### INFORMATION SYSTEMS AND ORGANISATIONS

Organization	Place	Year
International Federation for Documentation (FID)	Hague	1895
International Federation of Library Association and Institutions (IFLA)	Scotland	1927
International Council of Scientific Union (ICSU)	Brussels	1931
University Grant Commission (UGC): - <i>formally inaugurated by late Shri Maulana Abul Kalam Azad, the then Minister of Education, Natural Resources and Scientific Research on 28 December 1953. The UGC, however, was formally established only in November 1956 as a statutory body of the Government of India through an Act of Parliament for the coordination, determination, and maintenance of standards of university education in India.</i>	New Delhi	1953
International Atomic Energy Agency (IAEA)	Viena	1957
Defense Research & Development Organization	New Delhi	1958
Documentation Research & Training Center (DRTC)	Bangalore	1962
World Intellectual Property Organization (WIPO)	Geneva	1967

<b>Bhabha Atomic Research Center (BARC)</b> <i>Dr. Homi Jehangir Bhabha, born on October 30, 1909, is regarded as the Father of India's Nuclear Program. In 1945, he established the Tata Institute of Fundamental Research (TIFR) to promote nuclear science research. To further advance the nation's nuclear ambitions, he founded the Atomic Energy Establishment, Trombay (AEET) in January 1954, focusing on multidisciplinary research essential for exploiting nuclear energy. After his untimely demise on January 24, 1966, AEET was renamed the Bhabha Atomic Research Centre (BARC) in his honor.</i>	Mumbai	1967
<b>International Nuclear Information System (INIS)</b>	Viena	1970
<b>Agricultural Information System of FAO (AGRIS)</b>	Rome	1975
<b>Patent Information System (PIS)</b>	Nagpur	1980

### LIST OF IMPORTANT PROGRAMMING LANGUAGE WITH THEIR FOUNDER

Language	Creator/Developer	Year
<b>Python</b>	Guido van Rossum	1991
<b>Ruby</b>	Yukihiro Matsumoto	1993
<b>Java</b>	James Gosling	1995
<b>C</b>	Dennis M. Ritchie	1972
<b>C++</b>	Bjarne Stroustrup	1985
<b>PHP</b>	Rasmus Lerdorf	1994
<b>Perl</b>	Larry Wall	1987
<b>JavaScript</b>	Brendan Eich	1995
<b>Pascal</b>	Niklaus Wirth	1970
<b>Lisp</b>	John McCarthy	1958

### LIST OF COMMUNICATION MODELS

Model	Founder(s)	Year	Brief Information
<b>Aristotle's Model</b>	Aristotle	4th Cen. BCE	Aristotle's model emphasizes persuasion through rhetoric and the three modes of persuasion: ethos, pathos, and logos.
<b>Lasswell's Model</b>	Harold Lasswell	1948	Lasswell's model focuses on answering five key questions in the communication process: Who, Says What, In Which Channel, To Whom, With What Effect.
<b>Shannon - Weaver Model</b>	Claude Shannon and Warren Weaver	1949	The Shannon-Weaver model is a mathematical theory of communication, highlighting the elements of sender, message, channel, receiver, and feedback.

<b>Berlo's S-M-C-R Model</b>	David Berlo	1960	Berlo's model involves four components: Source, Message, Channel, Receiver, emphasizing the role of encoding and decoding in communication.
<b>Barnlund's Transactional Model</b>	Dean C. Barnlund	1970	This model views communication as a dynamic and ongoing process, with both parties acting as senders and receivers, exchanging messages simultaneously.
<b>Dance's Helical Model</b>	Frank Dance	1970	Dance's model suggests that communication is an ever-changing spiral process, with each interaction influencing future interactions in a continuous cycle.
<b>Osgood - Schramm Model</b>	Charles E. Osgood and Wilbur Schramm	1954	Osgood and Schramm's model emphasizes the role of feedback in communication and the concept of encoding and decoding messages.
<b>Westley and Maclean Model</b>	Bruce Westley and Malcolm Maclean	1957	This model introduces the concept of communication as a process involving various gatekeepers, with feedback loops influencing subsequent messages.
<b>Linear Model</b>	Harold D. Lasswell	1948	The linear model sees communication as a one-way process from sender to receiver, often oversimplifying the complexity of real-world communication.
<b>Transactional Model</b>	Harold D. Lasswell (contributed)	1960s	This model, associated with scholars like Harold D. Lasswell, views communication as an exchange where both parties play active roles, constantly influencing each other.
<b>Interactive Model</b>	Wilbur Schramm	1954	The interactive model emphasizes a two-way communication process, with feedback playing a crucial role in clarifying and improving the communication.

## COPYRIGHT ACTS

Name	Year	Short Info
<b>Berne Convention</b>	1886	An international treaty establishing the basic principles of copyright protection.
<b>British Copyright Act</b>	1911	Legislation in the United Kingdom governing copyright.
<b>Copyright Law in India (Pro-independence)</b>	1914	Early copyright legislation in India during the pre-independence period.

<b>Universal Declaration of Human Rights</b>	1948	Emphasizes the right to participate in cultural life, which has implications for copyright.
<b>Universal Copyright Convention</b>	1951	An international copyright treaty provides a framework for copyright protection.
<b>Copyright Act of the United Kingdom</b>	1956	Legislation in the United Kingdom further shaping copyright laws.
<b>Indian Copyright Act</b>	1957	Legislation in India governing copyright.
<b>Rome Convention</b>	1961	An international treaty protecting the rights of performers and producers of phonograms.
<b>WIPO Copyright Treaty</b>	1996	An agreement under the World Intellectual Property Organization addressing challenges of the digital age.
<b>Digital Millennium Copyright Act</b>	1998	A U.S. law addressing copyright issues arising from the digital environment.
<b>Information Technology Act (India)</b>	2000	Legislation in India dealing with various aspects of electronic commerce, including copyright.
<b>Right to Information Act (India)</b>	2005	Legislation in India providing citizens with the right to access information held by public authorities.

### S.R RANGANATHAN (LIST OF BOOKS)

<b>Book Title</b>	<b>Pub.Year</b>
<b>The Five Laws of Library Science</b>	1931
<b>Colon Classification (1st ed.)</b>	1933
<b>Classified Cataloguing Code</b>	1934
<b>Library Administration (first published)</b>	1935
<b>Prolegomena to Library Classification</b>	1937
<b>Theory of the Library Catalogue</b>	1938
<b>Colon Classification (2nd ed.)</b>	1939
<b>Elements of Library Classification</b>	1945
<b>Classification and International Documentation</b>	1948
<b>Colon Classification (3rd ed.)</b>	1950
<b>Classification and Communication</b>	1951
<b>Philosophy of Library Classification</b>	1951
<b>Library Manual</b>	1951
<b>Library Book Selection</b>	1952
<b>Colon Classification (4th ed.)</b>	1952
<b>Headings and Canons 1955</b>	1955
<b>Prolegomena to Library Classification (2nd ed.)</b>	1957
<b>Colon Classification (5th ed.)</b>	1957
<b>Colon Classification (6th ed.)</b>	1960
<b>Reference Service</b>	1961
<b>Documentation and its facets</b>	1963
<b>Library Book Selection (2nd ed.)</b>	1966
<b>Prolegomena to Library Classification (3rd ed.)</b>	1967
<b>Ramanujan: The man and the mathematician</b>	1967
<b>Documentation: Genesis and Development</b>	1973

<b>A Librarian Looks Back: An autobiography of Dr. S. R. Ranganathan (Editor: P. N. Kaula)</b>	1992
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### SHORT NOTES INFO ABOUT S.R RANGANATHAN SIR

*Note: Revise this section of S.R Ranganathan Sir accordingly to your need revision time (after each one week At least)*

- Full Name: Shiyali Ramamrita Ranganathan
- Birth and death Date: 9 August 1892 – 27 September 1972

#### Key Points:

- Born in Shiyali, Tanjavoor District, Tamil Nadu, India, in his maternal grandfather's house on North Rampart Street during Gayathri Japam day in the month of Adi of the year Nandana.
- Married Rukmini at the age of fifteen in 1907, but she tragically died in an accident in 1928.
- Ranganathan remarried Sarada in December 1929, who supported his endeavors in the library profession and encouraged philanthropy.
- Sarada passed away at the age of 78 in Bangalore on July 30, 1985.

#### Ranganathan's Sir Education Timeline:

- **1897:** Initiated education with Aksharabyasam at Ubhayavedanthapuram.
- **Early School:** Learned from Subba Ayyar, R. Antharama Ayyar, and Thiruvengkatachariar (influenced by Nayanars & Alwars teachings).
- **1908/1909:** Completed Matriculation with First Class at S.M. Hindu High School despite health challenges.
- **1909:** Joined Madras Christian College due to excellent marks and support from Prof. Skinner.
- **1913:** Completed B.A. in Mathematics with First Class.
- **1913-1916:** Pursued M.A. in Mathematics under Prof. Edward B. Ross (strong Guru-Shishya relationship).
- **1916:** Earned M.A. and aimed to become a Mathematics teacher.
- **1917:** Acquired L.T. degree in teaching technique. College Days: Developed connections with other professors like Moffat, Manickam, Sabhesan, Chinnathambi Pillai, and Subramanyam.

#### *Ranganathan's Sir Teaching Career Timeline*

##### 1917-1921:

- Appointed Assistant Lecturer in Government Colleges at Mangalore and Coimbatore.
- Taught Physics and Mathematics.
- Championed individualized instruction with active discussions, making classes lively and interactive.
- Earned nickname "Born Teacher" for engaging style and use of anecdotes.
- Encouraged applause and student-led presentations.
- Organized seminars and colloquia.

##### 1921-1923:

- Joined Presidency College, Madras as Assistant Professor of Mathematics.
- Taught Algebra, Trigonometry, and Statistics.
- Continued innovative teaching methods.

#### Extracurricular Activities:

- Secretary of Mathematics and Science Section of Madras Teacher's Guild.
- Public lectures to raise awareness.
- Advocated for standardization of exam papers and pension benefits for private school teachers.
- Supported Indian Mathematical Society financially.
- Popular figure in mathematics circles and regarded as an efficient organizer.

**Work Ethic:**

- Believed in focusing on work itself, not rewards.
- Quoted as saying: "Our right is only to do the work falling to our share, never to the fruits of our work. Flirt not with fruits."

***Ranganathan's Sir Journey to Librarianship: A Timeline*****1924:**

- January: Left Presidency College for Madras University Librarian position.
- Week Later: Returned to College, seeking return due to "solitary imprisonment."
- September: Embarked on a 9-month study-cum-observation tour in England.

**England:**

- Met W.C. Berwick Sayers, a key influence.
- Witnessed vibrant libraries serving diverse communities.
- Discovered a social mission for libraries and himself.

**1925:**

- July: Returned to India with a transformed perspective.

**1931:**

- Sir P.S. Siva swamy Aiyar recognized Ranganathan's impact

**1924-1925:**

- Ranganathan focused on reorganizing the University Library in Madras, aiming to attract more readers and provide better facilities.

**1928-1945:**

- Ranganathan founded the Madras Library Association, expanding the library movement across the Madras Presidency.

**1929:**

- Initiated a school of library science under the auspices of the Madras Library Association, later taken over by Madras University.

**1957:**

- Donated his life savings to establish the Sarada Ranganathan Professorship in Library Science at Madras University during its centenary celebrations.

***Activities at e Banaras Hindu University (1945-1947)*****1945-1947:**

- Invited by Vice-Chancellor Sir S. Radhakrishnan to develop the library system of Banaras Hindu University. Found the library in disarray and took on the task of reorganizing the entire collection. Single-handedly classified and cataloged approximately 100,000 books with great dedication.

**Same Period:**

- Conducted a Diploma Course in Library Science, showcasing his commitment to education and training in the field.

### *Ranganathan's Sir Flourishing Career in Delhi (1947-1955)*

#### **Teaching and Research:**

- Joined Delhi University in 1947, focusing on teaching and research in library science.
- Introduced "Study Circle" and "Research Circle" meetings, fostering innovation and team research.
- The Research Circle's journal, "Annals," gained international recognition.

#### **Leadership and Collaboration:**

- Elected President of the Indian Library Association (ILA).
- Launched the combined journal "ABGILA," promoting research and collaboration.
- Held leadership positions in the International Federation for Documentation (FID).
- Drafted a 30-year plan for India's library system development.
- Chaired the Documentation Committee of the Indian Standards Institution.

#### **National and International Impact:**

- Promoted the Madras Public Library Act.
- Founded the Classification Research Group in London.
- Visited USA and wrote "Classification and Communication."

### *Ranganathan's Sir Time in Zurich (1955-1957)*

#### **Objectives:**

- Gain firsthand knowledge of industrial documentation. ➤ Fulfill international commitments.

#### **Achievements:**

- Wrote the second edition of "Prolegomena to Library Classification."
- Regularly contributed to the "Annals of Library Science." *Activities at Bangalore*

#### **1957:**

- Moved to Bangalore.
- Assisted INSDOC, Planning Commission, and UGC as advisor.
- Gathered young librarians for research and publications.

#### **1962:**

- Founded Documentation Research and Training Centre (DRTC) in Bangalore.
- Served as Honorary Professor at DRTC (1962-1972).
- Promoted research and teaching in library and information science.

#### **1965:**

- Recognized as National Research Professor in Library Science (by Government of India).
- Awarded Doctor of Letters degrees by Delhi University and Pittsburgh University.

#### **1961:**

- Established Sarada Ranganathan Endowment for Library Science.

#### **Later years (1967-1972):**

- Focused on writing and research.
- Proposed Absolute Syntax for indexing language.
- Continued work on Colon Classification.
- Maintained active work ethic until his death in 1972.

#### **Additional Notes:**

- Ranganathan's legacy extends beyond his individual contributions, influencing a "human movement" in library science.
- He authored 60 books and 2000 articles, demonstrating a lifelong dedication to the field.
- His life and work embodied an ever-inquiring mind, influenced by philosophical principles.

All about S.R ranganathan Source: <https://www.isibang.ac.in/~library/portal/Pages/SRRBIO.pdf>

### **NISSAT INFORMATION CENTERS SECTORAL INFORMATION CENTERS**

<b>S.No.</b>	<b>Acronym</b>	<b>Full Form</b>	<b>Subject Area / Focus</b>	<b>Host Institution / Place</b>
1	NICLAI	National Information Centre for Leather and Allied Industries	Leather Technology	Central Leather Research Institute (CLRI), Chennai
2	NICFOS	National Information Centre for Food Sciences	Food Technology	Central Food Technological Research Institute (CFTRI), Mysore
3	NICMAP	National Information Centre for Machine Tools and Production Engineering	Machine Tools and Products	Central Machine Tools Institute, Bangalore
4	NICDAP	National Information Centre for Drugs and Pharmaceuticals	Drug and Pharmaceuticals	Central Drug Research Institute (CDRI), Lucknow
5	NICTAS	National Information Centre for Textiles and Allied Subjects	Textiles and Allied Subjects	Ahmedabad Textile Industry's Research Association (ATIRA), Ahmedabad
6	NICHEM	National Information Centre for Chemistry and Chemical Technology	Chemicals	National Chemical Laboratory (NCL), Pune
7	NICAC	National Information Centre for Advanced Ceramics	Glass and Ceramics	Central Glass and Ceramic Research Institute (CGRI), Kolkata
8	NICRYS	National Information Centre for Crystallography	Crystallography	University of Madras, Chennai
9	NCB	National Information Centre for Bibliometrics	Bibliometrics	NISCAIR (Now NIScPR), Delhi
10	NICDROM	National Information Centre for CD-ROM	National Aerospace / CD-ROM Technologies	National Aerospace Laboratory (NAL), Bangalore

11	NICMAN	National Information Centre for Management	Management	Indian Institute of Management (IIM), Ahmedabad
12	NICMAS	National Information Centre for Marine and Aquatic Sciences	Marine and Aquatic Sciences	National Institute of Oceanography, Goa
13	NCCC	CD-ROM National Collection Centre	CD-ROM Repository	Indian Institute of Technology (IIT), New Delhi

Subject Covered	Distributed Information Centre
<b>Genetic Engineering</b>	- Indian Institute of Science, Bangalore - Bose Institute, Calcutta - Madurai Kamraj University, Madurai - Jawaharlal Nehru University, New Delhi
<b>Virology and Animal Culture</b>	Poona University, Pune
<b>Plant Tissue Culture and Molecular Biology</b>	IARI, New Delhi
<b>Immunology</b>	Indian Institute of Immunology, New Delhi
<b>Nucleic Acid and Protein Sequencing</b>	CCMB, Hyderabad
<b>Oncogenesis, Reproduction Physiology</b>	Institute of Microbial Technology, Chandigarh
<b>Protein Modeling and Engineering</b>	Institute of Microbial Technology, Chandigarh
<b>Neuro Informatics</b>	National Brain Research Centre, Gurgaon

### NATIONAL ARCHIVES OF INDIA (NAI)

Aspect	Details
<b>Establishment</b>	March 1891, initially as the 'Imperial Record Department' in Calcutta, shifted to New Delhi in 1911, and housed in the present building since 1926.
<b>Networking of Libraries</b>	Five major libraries, including the NAI library, under the Ministry of Culture, are being networked.
<b>Other Libraries Involved</b>	- Central Secretariat Library - National Museum Library - National Gallery of Modern Art Library - Archaeological Survey of India Library

**INFOTERRA IS A GLOBAL ENVIRONMENTAL INFORMATION EXCHANGE  
NETWORK ESTABLISHED BY THE UNITED NATIONS ENVIRONMENT  
PROGRAMME (UNEP)**

Aspect	Details
<b>Establishment</b>	Conceived in 1972 at the Stockholm Conference, formalized by UNEP as IRS (International Referral System), renamed INFOTERRA.
<b>Key Events</b>	- <b>1972:</b> Stockholm Conference initiated the need for environmental info exchange. - <b>1992:</b> Rio Conference emphasized strengthening INFOTERRA for decision-making.
<b>Secretariat Location</b>	UNEP Headquarters, Nairobi.
<b>INFOTERRA Products and Services</b>	1) <b>Query Response Service</b> 2) <b>Environmental Literature Availability</b> 3) <b>Bibliographies on Environmental Topics</b> 4) <b>Directories of Environmental Information Sources</b> 5) <b>UNEP-INFOTERRA Publications</b> 6) <b>ENVOC Multilingual Thesaurus</b> 7) <b>INFOTERRA-ISIS</b> 8) <b>SASIN Environmental Database</b> 9) <b>Information on Environment and Development (CD-ROM/Internet)</b> 10) <b>National Focal Point Fact Sheet Database</b>
<b>INFOTERRA-ISIS</b>	A database management system that helps each national focal point maintain a local directory of environmental information sources.
<b>SASIN Database</b>	A searchable database with over 29,000 bibliographic references from Southern African Sub-regional INFOTERRA Network member organizations.
<b>List Servers</b>	INFOTERRA's subscription-based email list for promoting environmental info exchange.
<b>Services in India</b>	India participates actively, with <b>ENVIS (Environmental Information System)</b> designated as the National Focal Point (NFP) for INFOTERRA since 1985, and also as the Regional Service Centre (RSC) for South Asia.

**AGRIS (INTERNATIONAL INFORMATION SYSTEM FOR THE AGRICULTURAL  
SCIENCES AND TECHNOLOGY)**

Aspect	Details
<b>Establishment</b>	Started in 1974 by FAO of the United Nations, fully operational since 1975 with the first issue of AGRINDEX.
<b>Objective</b>	To build an information system in the field of agricultural science and technology and related subjects.
<b>Subject Areas Covered</b>	Agriculture, forestry, food, environment, animal sciences, aquatic sciences, fisheries, human nutrition, and more.
<b>Participating Countries</b>	Collaborative network of agricultural institutions worldwide.
<b>WebAGRIS</b>	A future networking platform covering ongoing agricultural projects and research.
<b>AGRIS AP (Application Profile)</b>	Guidelines for the description of information objects in the agricultural sciences and technology field.
<b>Electronic Discussion Forum</b>	Workspace for exchanging ideas on using AGRIS AP and WebAGRIS.

<b>AGROVOC</b>	A multilingual agricultural thesaurus available in English, French, and Spanish. It contains descriptors and non-descriptors.
<b>AGRIS Information Products</b>	<ul style="list-style-type: none"> <li>- <b>AGRIS and CARIS on CD</b>: Bibliographic references, CARIS Project Data, AGROVOC Thesaurus, FAO Catalogue.</li> <li>- <b>AGRIS Manuals</b>: Available for download.</li> <li>- <b>AGRIS and CARIS FTP site</b>: Available AGRIS and CARIS data.</li> <li>- <b>FAO Documentation</b>: Documents from 1980-2000 available online.</li> </ul>
<b>Services in India</b>	<b>Agricultural Research Information Centre</b> , Indian Council of Agricultural Research, New Delhi, is the participating institution from India.

### MEDLARS (MEDICAL LITERATURE ANALYSIS AND RETRIEVAL SYSTEM)

Aspect	Details
<b>Establishment</b>	MEDLARS was established in <b>1964</b> as a computerized storage and retrieval system.
<b>Location</b>	The <b>National Library of Medicine (NLM)</b> is located at the <b>National Institutes of Health (NIH)</b> in Bethesda, Maryland.
<b>Scope</b>	NLM is one of the largest medical libraries in the world, collecting materials on health sciences, chemistry, and physics.
<b>Key Component</b>	<b>MEDLINE</b> is the major component of MEDLARS, which contains bibliographic information available in the <b>Index Medicus</b> .
<b>Access to MEDLINE</b>	MEDLINE can be accessed through <b>PubMed</b> (freely available online) and the <b>NLM Gateway</b> .
<b>Other NLM Resources</b>	NLM offers several databases and resources, including: <ul style="list-style-type: none"> <li>- <b>TOXLINE</b></li> <li>- <b>NLM Catalog</b></li> <li>- <b>MedlinePlus</b></li> <li>- <b>ClinicalTrials.gov</b></li> <li>- <b>DIRLINE</b></li> <li>- <b>Genetics Home Reference</b></li> <li>- <b>Meeting Abstracts</b></li> <li>- <b>HSRProj</b></li> <li>- <b>OMIM</b></li> <li>- <b>HSDB</b></li> <li>- <b>NCBI Bookshelf</b></li> </ul>
<b>Indian MEDLARS Centre (IMC)</b>	Jointly set up by <b>NIC</b> (National Informatics Centre) and <b>ICMR</b> (Indian Council of Medical Research), the IMC serves the medical community in India.
<b>IMC Services</b>	IMC developed a bibliographic database of <b>Indian biomedical literature</b> from peer-reviewed journals. It provides easy access to Indian biomedical information for medical professionals, researchers, students, and medical library professionals.

**NATIONAL INSTITUTE OF SCIENCE COMMUNICATION AND INFORMATION RESOURCES  
(NISCAIR)**

Aspect	Details
<b>Establishment</b>	NISCAIR was established in <b>1952</b> as INSDOC and later merged with the <b>National Institute of Science Communication (NISCOM)</b> in <b>2002</b> . It is now a CSIR laboratory.
<b>Function</b>	NISCAIR provides scientific and technical information to users in India and abroad, focusing on communication and information resources for science and technology.
<b>Journals Published by NISCAIR</b>	NISCAIR publishes <b>17 primary journals</b> and <b>2 abstracting journals</b> related to various scientific disciplines.
<b>Primary Journals</b>	<ol style="list-style-type: none"> <li>1. <b>Journal of Scientific and Industrial Research</b> (monthly)</li> <li>2. <b>Indian Journal of Chemistry A</b> (monthly)</li> <li>3. <b>Indian Journal of Chemistry B</b> (monthly)</li> <li>4. <b>Indian Journal of Experimental Biology</b> (monthly)</li> <li>5. <b>Indian Journal of Pure &amp; Applied Physics</b> (monthly)</li> <li>6. <b>Indian Journal of Biochemistry &amp; Biophysics</b> (bi-monthly)</li> <li>7. <b>Indian Journal of Engineering &amp; Material Sciences</b> (bi-monthly)</li> <li>8. <b>Indian Journal of Chemical Technology</b> (bi-monthly)</li> <li>9. <b>Indian Journal of Radio &amp; Space Physics</b> (bi-monthly)</li> <li>10. <b>Journal of Intellectual Property Rights</b> (bi-monthly)</li> <li>11. <b>Indian Journal of Marine Sciences</b> (quarterly)</li> <li>12. <b>Indian Journal of Fibre &amp; Textile Research</b> (quarterly)</li> <li>13. <b>National Product Radiance</b> (bi-monthly)</li> <li>14. <b>Indian Journal of Biotechnology</b> (quarterly)</li> <li>15. <b>Indian Journal of Traditional Knowledge</b> (quarterly)</li> <li>16. <b>Annals of Library and Information Studies</b> (quarterly)</li> <li>17. <b>Bhartiya Vaigyanik evam Audyogik Anusandhan Patrika</b> (Hindi, half-yearly)</li> </ol>
<b>Abstracting Journals</b>	<ol style="list-style-type: none"> <li>1. <b>Medicinal and Aromatic Plants Abstracts</b> (bi-monthly)</li> <li>2. <b>Indian Science Abstracts</b> (fortnightly)</li> </ol>

**YEARS OF ORGANIZATION ESTABLISHMENT**

Organization	Full Form	Year Est.
<b>ILO</b>	International Labour Organization	1919
<b>ICAR</b>	Indian Council of Agricultural Research	1936
<b>CSIR</b>	Council of Scientific and Industrial Research	1942
<b>FAO</b>	Food and Agriculture Organization	1945
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization	1946
<b>UGC</b>	University Grants Commission	1953
<b>DRDO</b>	Defence Research and Development Organization	1958
<b>MEDLARS</b>	Medical Literature Analysis and Retrieval System	1964

<b>OCLC</b>	Online Computer Library Centre	1967
<b>ICSSR</b>	Indian Council of Social Science Research	1969
<b>ICMR</b>	Indian Council of Medical Research	1969
<b>WIPO</b>	World Intellectual Property Organization	1970
<b>INIS</b>	International Nuclear Information System	1970
<b>ICHR</b>	Indian Council of Historical Research	1971
<b>DST</b>	Department of Science and Technology	1971
<b>INFOTERRA</b>	International Environmental Information System	1972
<b>RLIN</b>	Research Libraries Information Network	1974
<b>AGRIS</b>	Agricultural Information Retrieval System	1974
<b>ICPR</b>	Indian Council of Philosophical Research	1981
<b>CALIBNET</b>	Calcutta Library Network	1986
<b>CURL</b>	Consortium of University Research Libraries	1987
<b>DELENT</b>	Developing Library Network	1988
<b>AARNET</b>	Australia's Research and Education Network	1989
<b>INFLIBNET</b>	Information and Library Network	1991
<b>MALIBNET</b>	Madras Library Network	1991
<b>PUNENET</b>	Pune Library Network	1992
<b>SUPLIS</b>	Supreme Court Judges Library	1992
<b>ADINET</b>	Ahmedabad Library Network	1993
<b>BONET</b>	Bombay Library Network	1994
<b>MYLIBNET</b>	Mysore Library Network	1995
<b>CALIS</b>	China Academic Library and Information System	1998

**Source:**

[https://worldlibraries.dom.edu/index.php/worldlib/article/view/351/307#:~:text=The%20Bombay%20Library%20Network%20\(BONET,Network%20is%20sponsored%20by%20NISSAT.](https://worldlibraries.dom.edu/index.php/worldlib/article/view/351/307#:~:text=The%20Bombay%20Library%20Network%20(BONET,Network%20is%20sponsored%20by%20NISSAT.)

## DEFENCE SCIENTIFIC INFORMATION AND DOCUMENTATION CENTRE (DESIDOC)

Aspect	Details
<b>Name</b>	Defence Scientific Information and Documentation Centre (DESIDOC)
<b>Establishment</b>	1958 (as Scientific Information Bureau, a division of Defence Science Laboratory)
<b>Reorganization &amp; Renaming</b>	1967 (renamed as DESIDOC)
<b>Independence</b>	1970 (became an independent unit under DRDO)
<b>Location</b>	Initially in Metcalfe House, later moved to a new building in the same complex in 1988
<b>Parent Organization</b>	Defence Research and Development Organisation (DRDO)
<b>Publications</b>	1) <b>Defence Science Journal</b> 2) <b>Popular Science &amp; Technology</b>

	3) <b>DRDO Newsletter</b> 4) <b>DRDO Samachar</b> 5) <b>R&amp;D Digest</b> 6) <b>Technology Focus</b> 7) <b>DESIDOC Bulletin of Information Technology</b>
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### UNITED NATIONS EDUCATIONAL SCIENTIFIC AND CULTURAL ORGANISATION (UNESCO) PROGRAMS

Aspect	Details
<b>ORBICOM</b>	An international network linking communications leaders from academic, media, corporate, and government sectors for exchanging information and developing shared projects.
<b>UNAL</b>	Established in 1990, promotes cooperation among public libraries to build international understanding and establish contacts between libraries of the North and South.
<b>APIN (Asia and Pacific Information Network)</b>	Merges three regional networks: 1) ASTINFO (Regional Network for the Exchange of Information and Experiences in Science and Technology in Asia and the Pacific) 2) RINSEAP (Regional Informatics Network for Southeast Asia and the Pacific) 3) RINSCA (Regional Informatics Network for South and Central Asia).
<b>UNESCO Intergovernmental Programmes</b>	UNESCO currently runs two intergovernmental programmes in communication and information, replacing previous programmes until the year 2000.
<b>UNISIST (World Science Information System)</b>	Launched in 1973, marks a new phase in UNESCO's work in library, documentation, and information, with emphasis on scientific and technological information.
<b>UNISIST Study Report (1971)</b>	The working document for UNISIST, outlining the broad principles of the World Science Information System.
<b>Inter-Governmental Conferences for UNISIST</b>	Three major conferences: UNISIST I (1971), NATIS, and UNISIST II (1974, 1979) recognized several programmes and made recommendations for their implementation.

### *INTERNATIONAL FEDERATION OF LIBRARY ASSOCIATIONS AND INSTITUTIONS (IFLA)*

Aspect	Details
<b>Founded</b>	1927 in Edinburgh, Scotland.
<b>Goal</b>	To promote international contacts among library associations and librarians.
<b>Type</b>	Non-governmental professional organization.
<b>Headquarters</b>	The Hague, Netherlands (since 1971).
<b>Core Programmes</b>	1. Universal Bibliographic Control and International MARC (UBCIM) 2. Universal Availability of Publications (UAP) 3. Universal Dataflow and Telecommunications (UDT)

<b>Action for Development through Libraries Programme (ALP)</b>	Launched in 1984, renamed in 2004 as "Action for Development through Libraries Programme" (acronym remains ALP).
<b>Committee on Copyright and other Legal Matters (CLM)</b>	Handles copyright issues and advocates for the international library community.
<b>Committee on Free Access to Information and Freedom of Expression (FAIFE)</b>	Defends basic human rights, particularly free access to information and freedom of expression in libraries.
<b>IFLA-CDNL Alliance for Bibliographic Standards (ICABS)</b>	Formed to coordinate bibliographic and resource control activities. Involves collaboration with national libraries and other entities like Biblioteca Nacional de Portugal, IFLA, and CDNL.
<b>Preservation and Conservation (PAC)</b>	Core activity started in 1984.
<b>IFLA UNIMARC</b>	Coordinates the development and promotion of the Universal MARC format, used for international exchange of bibliographic data.
<b>Divisions and Sections</b>	<ol style="list-style-type: none"> <li>1. General Research Libraries</li> <li>2. Libraries Serving the General Public</li> <li>3. Special Libraries</li> <li>4. Collection and Services</li> <li>5. Bibliographic Control</li> <li>6. Management and Technology</li> <li>7. Education and Research</li> <li>8. Regional Activities</li> </ol>
<b>IFLANET</b>	IFLA's network initiated in 1993 to improve communication within IFLA and provide virtual presence.
<b>Publications</b>	<ol style="list-style-type: none"> <li>1. IFLA Journal (Quarterly)</li> <li>2. IFLA Annual</li> <li>3. IFLA Trends (Biennial Report)</li> <li>4. IFLA Medium Term Programme</li> <li>5. IFLA Statutes and Rules of Procedure</li> <li>6. Divisional and Sectional Newsletters</li> </ol>
<b>Regional Offices</b>	Africa, Asia and Oceania, and Latin America.

### ***OSI MODEL***

History and Information: The Open Systems Interconnection (OSI) model is a conceptual framework for networking developed by the International Organization for Standardization (ISO) in 1984. It provides a layered approach to understanding how communication occurs between systems over a network. Year: 1984

S.N.	Layer	Layers	Description	Devices/Examples
1	<b>Physical layer</b>	Physical Layer	Transmits bit stream to physical medium	Network cables, hubs, repeaters
2	<b>Data Link layer</b>	Data Link Layer	Provides data exchange between devices on the same medium	Ethernet switches, MAC addresses

3	<b>Network layer</b>	Network Layer	Takes care of switches and routes information units	Routers, IP addresses
4	<b>Transport layer</b>	Transport Layer	Provides reliable end-to-end data transmission	TCP, UDP protocols, segments
5	<b>Session layer</b>	Session Layer	Maintains dialogue between communication devices	API, Sockets, NetBIOS
6	<b>Presentation layer</b>	Presentation Layer	Formats data (e.g., ASCII)	Encryption, decryption, MIME types
7	<b>Application layer</b>	Application Layer	Provides general services related to applications	HTTP, FTP, SMTP, DNS

### ***CCF UNESCO PGI***

#### **Full name:(General Information Program)**

- 1978. (ISO standard 2709) published in 1984.
- CCF consists of the major four parts:
- Record label (24 character)
- Directory (five parts tag, length of data field, starting character position, segment identifier, occurrence identifier)
- Data fields (indicator, one or more sub fields, a data field separator, indicators, sub-fields)
- Record separator

### ***DIFFERENT TYPES OF DATABASE MANAGEMENT SYSTEMS (DBMS)***

<b>DBMS Type</b>	<b>Description</b>	<b>Examples</b>
<b>Relational Database Management System (RDBMS)</b>	Developed by E.F. Codd, based on the relational data model using tables with rows and columns to represent data and relationships.	Oracle, Access, FoxPro, SQL Server, Informix, Sybase, Visual Basic
<b>Object-Oriented Database Management System (OODBMS)</b>	Based on the object-oriented data model, where data is stored in the form of persistent, sharable objects supporting object-oriented principles.	Jasmine, GemStone, O2, Object Store, Versant ODBMS
<b>Object-Relational Database Management System (ORDBMS)</b>	A hybrid of RDBMS and OODBMS that allows the inclusion of richer object structures and rules, maintaining a consistent data structure in a relational database.	DB2, Dynamic Server, Oracle 8i

### **DIFFERENT LIBRARY AND INFORMATION SCIENCE (LIS) PROFESSIONALS**

<b>Profession</b>	<b>Description</b>
<b>Library Administrator</b>	Responsible for the overall administration of a library. The head is typically the <b>Chief Librarian</b> , with subordinates such as <b>Deputy Librarian</b> and <b>Assistant Librarian</b> .

<b>Classifier</b>	A classifier categorizes books using a classification scheme (e.g., Dewey Decimal Classification). They determine the subject of a book through its title, contents, text, and index.
<b>Cataloguer</b>	A cataloguer is responsible for creating library catalog records following a catalogue code. They collect information about the book, such as title, author, edition, ISBN, etc.
<b>Classificationist</b>	A classificationist designs and develops classification systems. General classificationists create systems for all subjects, while specialist classificationists focus on specific subjects.
<b>Indexer</b>	An indexer creates indexes to help locate information within documents, using methods like KWIC (Key Word in Context) and KWOC (Key Word out of Context).
<b>Reference Librarian</b>	A reference librarian provides expert information and reference services, assisting users in finding and utilizing information from various sources.
<b>LIS Teacher</b>	A teacher in <b>Library and Information Science (LIS)</b> educates students in various LIS courses, guides research students, and writes textbooks and course materials.
<b>Thesaurus Designer</b>	A professional who designs thesauri, particularly for computer-assisted information retrieval. This profession emerged with the advent of computers in LIS.
<b>Bibliographer</b>	A bibliographer compiles and maintains bibliographies. Special libraries, in particular, provide bibliographical services to their users.
<b>Librametrician</b>	A librametrician specializes in <b>librametrics</b> , the measurement of library activities, collections, staff, and facilities. The term was coined by S. R. Ranganathan in 1949.
<b>Bibliometrician</b>	A bibliometrician specializes in <b>bibliometrics</b> , the study of bibliometric data, often using statistical techniques to analyze documents, their authors, and citations.
<b>Content Developer</b>	A content developer designs and creates content for the internet, including text, images, animations, and interactive features. This role has become important with the rise of digital content.

### ISI Web of Knowledge Contents

Category	Details
<b>Overview</b>	ISI Web of Knowledge is an integrated, Internet-based platform that provides a single point of access for a variety of scholarly information. It was launched by the Institute for Scientific Information (ISI) in 2001.
<b>Core Contents</b>	<ul style="list-style-type: none"> <li>- <b>ISI Web of Science:</b> Access to journal literature and citation indexes.</li> <li>- <b>Current Contents Connect:</b> Access to current scholarly literature.</li> <li>- <b>ISI Proceedings:</b> Access to conference proceedings literature.</li> <li>- <b>Derwent Innovation Index:</b> Access to patent literature.</li> </ul>
<b>Analytical Contents</b>	<ul style="list-style-type: none"> <li>- <b>Journal Citation Reports on the Web:</b> Evaluates scholarly journals.</li> <li>- <b>Essential Science Indicators:</b> Tracks trends in S&amp;T and social sciences performance.</li> </ul>

	- <b>HighlyCited.com</b> : Information on the world's most highly cited researchers and their achievements.
<b>Hosted Contents</b>	<ul style="list-style-type: none"> <li>- <b>BIOSIS Preview</b>: Biomedical and life sciences literature.</li> <li>- <b>CAB Abstracts</b>: Applied life and agricultural sciences literature.</li> <li>- <b>INSPEC</b>: Applied sciences literature in physics, electronics, control engineering, computing, and IT.</li> <li>- <b>PsycINFO</b>: Literature in behavioral sciences.</li> <li>- <b>FSTA</b>: Food science and technology abstracts.</li> </ul>
<b>Information Management Tools</b>	<ul style="list-style-type: none"> <li>- <b>WebFeat Prism</b>: Extends cross-searching to include freely available Internet resources and proprietary library collections.</li> <li>- <b>1Cate</b>: Open URL-compatible tool for direct access to full-text documents hosted by primary publishers.</li> </ul>
<b>Targeted Information Needs</b>	ISI Web of Knowledge caters to all types of information needs, especially current and performance-based scholarly requirements. Current Contents Connect addresses current needs specifically.

### Machine Translation (MT) Systems

Field	Details
<b>MT Systems for Mainframe Computers</b>	<ul style="list-style-type: none"> <li>- SYSTRAN (35 language pairs)</li> <li>- METAL (German to English, English to German, German to Spanish, French to Dutch, Dutch to French)</li> <li>- LOGOS (German to English, English to French, German, Italian, Spanish)</li> <li>- Fujitsu (ATLAS: English to Japanese and vice versa)</li> </ul>
<b>MT Systems for Personal Computers (1980s)</b>	<ul style="list-style-type: none"> <li>- Wielder MicroCat (First successful system)</li> <li>- PIVOT (NEC)</li> <li>- ASTRANSAC (Toshiba)</li> <li>- HICATS (Hitachi)</li> <li>- PENSEE (Oki)</li> <li>- DUET (Sharp)</li> <li>- PC-Translator, Globalink, LogoVista</li> </ul>
<b>SYSTRAN PC Products</b>	<ul style="list-style-type: none"> <li>- SYSTRAN Professional</li> <li>- SYSTRAN Personal</li> <li>- SYSTRAN Office Translator</li> <li>- SYSTRAN WebTranslator</li> </ul>
<b>Advantages of SYSTRAN</b>	Large dictionary databases and a large number of languages
<b>MT Systems for Internet</b>	<ul style="list-style-type: none"> <li>- Systran, Logos, Globalink, Fujitsu, JICST, NEC (network-based translation services for on-demand translations)</li> <li>- LANT (Belgium) - multilingual service for email, web pages, and attached files</li> <li>- MTSU (Singapore) - large-scale translation over the Internet</li> </ul>

### WORLD TRANSLATION INDEX (WTI)

Field	Details
<b>Coverage Period</b>	1987 to Dec. 1997
<b>Subject Focus</b>	Translations from all languages to Western European languages in all fields of science and technology

<b>Collecting Agencies</b>	<ul style="list-style-type: none"> <li>- International Translation Centre (ITC), Delft, The Netherlands</li> <li>- Centre National de la Recherche Scientifique (CNRS), France</li> <li>- National Translation Centre, Chicago</li> </ul>
<b>Content</b>	Bibliographical references to both original and translated documents
<b>Translation Types</b>	<ul style="list-style-type: none"> <li>- Published and unpublished translations</li> <li>- Serial and non-serial publications</li> </ul>
<b>Translation Source</b>	80% to 85% of the translations are journal articles
<b>Publication Frequency</b>	10 issues per year
<b>Document Delivery Locations</b>	<ul style="list-style-type: none"> <li>- National Research Council of Canada, Document Delivery Section, Canada</li> <li>- BLDSC, Boston Spa, U.K.</li> <li>- Delft Technical University, Delft, The Netherlands</li> </ul>
<b>ITC History</b>	<ul style="list-style-type: none"> <li>- Established in 1961 as European Translation Centre (ETC), renamed to ITC in 1975</li> <li>- Initiated to prevent duplication of translation work and facilitate exchange of information through translations</li> </ul>
<b>Previous Publications</b>	<ul style="list-style-type: none"> <li>- World Index of Scientific Translations (1967-1977)</li> <li>- List of Translations notified to ETC (1967-1977)</li> <li>- World Transindex (1977-1986)</li> </ul>
<b>Closure</b>	WTI publication stopped in Dec. 1997 due to the closure of ITC

### ***DIFFERENT PATENT INFORMATION SERVICES***

<b>Service Name</b>	<b>Description</b>
<b>INPADOC Patent Register Service (PRS)</b>	A legal status database that provides information on whether a patent is still valid or has expired. It helps users identify patents that are no longer protected.
<b>Intellectual Properties and Know-How Informatics (Patents) Division</b>	Provides online and offline patent information services in India.
<b>CASSIS-ASSIST</b>	A search and information tool for searching US patents.
<b>CASSIS-CLASS</b>	A database dealing with the US Patents classification scheme.
<b>EKASWA-A</b>	Covers Indian patent applications published in the Gazette of India (Part III, Section II) from January 1995 onwards.
<b>EKASWA-B</b>	Covers Indian patent applications notified for opposition, as published in the Gazette of India (Part III, Section II) from January 1995 onwards.

### ***DIFFERENT TYPES OF SEARCHES USED IN DATABASES***

<b>Search Type</b>	<b>Description</b>
<b>Keyword and Phrase Search</b>	A search can be conducted by entering a single search term or a phrase containing multiple terms.
<b>Boolean Search</b>	<p>Uses Boolean logic with three types:</p> <ol style="list-style-type: none"> <li>1. <b>AND</b>: Combines terms, retrieving records that contain all terms.</li> <li>2. <b>OR</b>: Combines terms, retrieving records that contain any of the terms.</li> <li>3. <b>NOT</b>: Excludes terms, retrieving records that do not contain specified terms.</li> </ol>

<b>Truncation</b>	Allows the search of all forms of a word with the same root. This can be applied to the left, right, or center of a word.
<b>Proximity Search</b>	Specifies how close search terms should be to each other: i) Adjacent terms ii) Terms with one or more words in between iii) Terms within the same paragraph.
<b>Field-Specific Search</b>	Restricts the search to specific fields within a database (e.g., title, author, subject).
<b>Limiting Search</b>	Limits results based on specific criteria such as language, publication year, or source type.
<b>Range Search</b>	Allows selecting records within a certain numerical or date range, often useful for filtering results by publication year.

### ***LIBRARY NETWORK IN INDIA***

<b>Network</b>	<b>Full Form</b>	<b>Year Est.</b>
<b>NICNET</b>	National Informatics Centre Network	1977
<b>ERNET</b>	Education and Research Network	1986
<b>INFLIBNET</b>	Information and Library Network	1988
<b>DELNET</b>	Developing Library Network	1988
<b>ADINET</b>	Agriculture Information Dissemination Network	1993
<b>CALIBNET</b>	Calcutta Library Network	1986
<b>MYLIBNET</b>	Mysore Library Network	1994
<b>UGC INFONET</b>	University Grants Commission Information Network	2002
<b>HELINET</b>	Health Library Network	2003

### **MARC FORMAT**

<b>Name</b>	<b>Description</b>
<b>Authority records</b>	Provide information about individual names, subjects, and uniform titles. An authority record establishes an authorized form of each heading.
<b>Bibliographic records</b>	Describe the intellectual and physical characteristics of bibliographic resources (books, sound recordings, video recordings, and so forth).
<b>Classification records</b>	MARC records containing classification data. For example, the Library of Congress Classification has been encoded using the MARC 21 Classification format.
<b>Community Information records</b>	MARC records describing a service-providing agency, such as a local homeless shelter or tax assistance provider.
<b>Holdings records</b>	Provide copy-specific information on a library resource (call number, shelf location, volumes held, and so forth).

## STRUCTURE OF AN ISBD RECORD

The ISBD defines nine areas of description. Each area, except area 7, is composed of multiple elements with structured classifications. Elements and areas that do not apply to a particular resource are omitted from the description. Standardized punctuation (colons, semicolons, slashes, dashes, commas, and periods) is used to identify and separate the elements and areas. The order of elements and standardized punctuation make it easier to interpret bibliographic records when one does not understand the language of the description.

0: Content form and media type area

1: Title and statement of responsibility area, consisting of

1.1 Title proper

1.2 Parallel title

1.3 Other title information

1.4 Statement of responsibility

2: Edition area

3: Material or type of resource specific area (e.g., the scale of a map or the numbering of a periodical)

4: Publication, production, distribution, etc., area

5: Material description area (e.g., number of pages in a book or number of CDs issued as a unit) 6: Series area

7: Notes area

8: Resource identifier and terms of availability area (e.g., ISBN, ISSN)

AACR-2R consists of two parts: Part I and Part II. 4.2.1 Part I: Description Part I covers rules for standard description of all kinds of material (print and nonprint). It contains 13 chapters as enumerated below:

- **General Rules for Description**
- **Books, Pamphlets and Printed Sheets**
- **Cartographic Materials**
- **Manuscripts**
- **Music Cataloguing Documents Using AACR-2R 7 2 Cataloguing**
- **Sound Recordings**
- **Motion Pictures and Video Recordings**
- **Graphic Materials**
- **Machine Readable Data Files**
- **Three Dimensional Artifacts and Realia**
- **Microforms**
- **Serials**
- **Analysis**

AACR- 2R

### Part I: Standard Description

- Chapter 1: General rules for all materials (print & non-print)
- Chapters 2-12: Specific rules for different types of materials (books, music, maps, etc.)
- Chapter 13: Analytical entries (relationships between bibliographic items)

### Part II: Headings, Uniform Titles and References

- Chapters 21-26: Establishing access points in catalogs (applicable to all materials)
- Chapter 21: Choice of main and added entries

- Chapters 22-24: Rules for forming headings for persons, geographic names, and corporate bodies
- Chapter 25: Uniform titles
- Chapter 26: References

### **Additional Resources**

Appendices: Capitalization, abbreviations, numerals, glossary ,Index

Note: There are no chapters between 13 and 21.

AACR-2R has prescribed three levels of description

### **PERSON AND THEIR AREA OF CONTRIBUTION**

<b>Name</b>	<b>Area Personality or Contribution</b>
<b>Abraham Maslow</b>	Hierarchy of Needs
<b>Allen Kent</b>	Mechanized Information Retrieval
<b>Alvin Toffer</b>	Power Shift, Information Overload
<b>Beesman</b>	Information Transfer
<b>Belkin, 1989</b>	Anomalous State of Knowledge (ASK)
<b>Benjamin Dancer</b>	Microphotography
<b>Bibliometry (1969)</b>	Alan Pritchard
<b>Black and Moutan</b>	Management Grid
<b>Bradford's Law (1934)</b>	Samuel C Bradford
<b>Blair and Maron</b>	Evaluation study on retrieval effectiveness of full text search (STAIRS)
<b>C.A. Cutter</b>	Expansive Classification, Dictionary Catalogue
<b>C.W.Hanson</b>	Divides Documentary Sources of Inf. Into Primary & Secondary
<b>Charles Babbage</b>	Analytical Engine
<b>Chris Rusbridge</b>	Hybrid Library (1998)
<b>Charless F Gosnell</b>	Half-Life of information
<b>Calvin Mooers</b>	Information Retrieval System
<b>Conard Gesner</b>	Father of Bibliography (1545)
<b>Craven TC</b>	LIPHIS (Linked Phrase Indexing System)
<b>Derek J. de Solla Price</b>	Little Science Big Science (1963), Invisible College (1972)
<b>D.J. Fosket</b>	Subject Approach to Information
<b>Denis Grogan</b>	Divides Documentary Sources of Inf. Into Primary, Secondary & Tertiary
<b>E. Garfield</b>	Citation Indexing
<b>Eisenberg and Berkowitz</b>	The Big 6 model of Information problem solving
<b>E.J. Coates</b>	Retroactive ordinal notation
<b>Elton Mayo</b>	Father of Human Relation School
<b>F. Hertzberg</b>	Father of Corporate Strategy
<b>F.W. Taylor</b>	Father of Scientific Theory of Management
<b>Fermont Rider</b>	International Classification
<b>George Gerbner (1956)</b>	General Model (Means and control dimensions relationship between communicating agent and communication products)
<b>H.E. Bliss</b>	Bibliographic Classification, Organization of Knowledge in libraries and subject approach
<b>H.P. Luhn (IBM)</b>	KWIC, Uniterm Indexing, SDI (1950)
<b>Henry Foyal</b>	Classical Theory, Father of Administration, and 14 principles

<b>J. Kaiser</b>	Concrete Process
<b>J.D. Brown</b>	Subject Classification, One place Theory
<b>J.D. Fosket</b>	Subject approach of information
<b>J.E.L. Farradone</b>	Systematic Indexing System
<b>J.R. Sharp</b>	Key Word Indexing
<b>James Duff Brown</b>	Open Access System in British Library
<b>James I. Wyer</b>	Conservative, Moderate & Liberal Theories of Ref. Service
<b>Jean Aitkinson</b>	The Sauro-Facet
<b>John Cotton Dana</b>	Newark Changing System
<b>Kauro Ishikawa</b>	The seven basic tools for quality control
<b>Koontz</b>	Classification of Management Theory (Human behavioral theory)
<b>Lancaster FW</b>	Theory of scales for the measurement of operational variables
<b>Lasswell (1948)</b>	Communication model (Who says, What, which channel, Whom, and with What Effect)
<b>Lotka Law (1926)</b>	Frequency of Publication by Authors in a given field. Scientific productivity
<b>Luther Gulick</b>	POSDCORB
<b>M. Taube</b>	SLIC Indexing
<b>M.M.Kessler</b>	Bibliographic Coupling
<b>Madden, Moon, Moore, McPheron</b>	Librarianship is not a profession
<b>Marcel Dekker</b>	Encyclopedia of Library and Information Science
<b>Mc Colvin</b>	Demand & Supply Theory of Books
<b>Michael Polayani</b>	Two categories of as 'explicit' and 'tacit' knowledge
<b>Michael Stern Hart</b>	Invented the e-book in 1971
<b>Michael Casey</b>	Term "Library 2.0" was first used
<b>Minie Sears</b>	Sears List of Subject Heading
<b>Osgood and Schramm</b>	Circular Model
<b>A. Norbert Wiener</b>	Cybernetics was pioneered
<b>Otto Nacke</b>	Coined informatics in 1979
<b>Ouchi</b>	Theory Z
<b>Pascal</b>	Calculating Machine
<b>Paul Outlet &amp; Henry Lafontaine</b>	Universal Classification, UDC, The Library World
<b>Paulin Autherton</b>	Putting knowledge to work
<b>Peter Drucker</b>	MBO (Management by Objective)
<b>Peter Phyr</b>	Zero Base Budgeting
<b>S.C. Bradford</b>	Documentation
<b>Rubert Fugmann</b>	Theory of Information Supply and Indexing based on five axioms
<b>S.R. Ranganathan</b>	Elements of Library Classification, prologma, Tree Card System, CC and CCC
<b>Samuel S Green</b>	Reference Service
<b>Samuel Rothstein</b>	Minimal, Middling & Maximum theories of Reference Service
<b>Saracevic, 1995</b>	TREC experiments (Text Retrieval Evaluation Conference)
<b>Shanan Weaver</b>	Mathematical communication model, Berlo 1988 S-M-C-R Model

<b>Schramm</b>	Models Concept or Theory (Human communication model)
<b>Ted Nelson</b>	Hypertext
<b>Tim Berners-Lee</b>	World Wide Web (WWW)
<b>Tim O'Reilly &amp; Dale Dougherty</b>	Web 2.0 (2014) Darcy DiNucci in 1999
<b>Von Bertalanffy</b>	General Systems Theory (GST)
<b>Vroom (1964)</b>	Formula of Motivation $P = f(M, A, \text{and } E)$ $P$ = Performance, $M$ = Motivation, $A$ = Ability, $E$ = Environment
<b>W.A. Borden</b>	Started the Reference Service in India
<b>William Gibson</b>	Cyberspace
<b>W.B.C. Sayers</b>	Teacher of S.R. Ranganathan at London
<b>Wyndham Hulme</b>	'Literary warrant' for book classification was introduced

### LIST OF CONSORTIA

Name	Est.Year	Anchoring Institution	Funding Agency
<b>NKRC</b>	2002	CSIR-NISCAIR	CSIR & DST
<b>UGC-INFONET</b>	2003	INFLIBNET	UGC
<b>INDEST-AICTE</b>	2003	IIT Delhi	MHRD/AICTE
<b>DAE Consortium</b>	2003	NA	DAE
<b>MCIT</b>	2005	NIC	MCIT
<b>CeRA</b>	2008	IARI	ICAR
<b>ERMED</b>	2008	NML	MH&FW
<b>DeLCON</b>	2009	NBRC	BDT
<b>DRDO</b>	2009	DESIDOC	DRDO, MoD
<b>NLIST</b>	2010	INFLIBNET	MHRD
<b>e-Shodh Sindhu</b>	2015	INFLIBNET	MHRD
<b>DERCON</b>	2015	Min. Earth Sci.	Min. Earth Sci.

### FULL-TEXT AGGREGATORS

Name	Discipline(s)	Access cost	Provider(s)
<b>Internet Archive Scholar</b>	Multidisciplinary	Free	Internet Archive
<b>CORE</b>	Multidisciplinary	Free	Open University
<b>CiteSeerX</b>	Multidisciplinary	Free	Pennsylvania State University
<b>Paperity</b>	Multidisciplinary	Free	Paperity Sp. z o.o.
<b>Semantic Scholar</b>	Multidisciplinary	Free	Allen Institute for Artificial Intelligence
<b>Europe PMC</b>	Biomedical	Free	European Bioinformatics Institute (EMBL-EBI)
<b>PubMed Central (PMC)</b>	Biomedical	Free	National Institutes of Health (NIH), U.S. National Library of Medicine (NLM)

<b>ResearchGate</b>	Multidisciplinary	Free	ResearchGate GmbH
<b>SSRN: Social Science Research Network</b>	Social science	Free & Subscription	Elsevier
<b>HAL</b>	Multidisciplinary	Free	CNRS's Centre pour la Communication Scientifique Directe (CCSD)
<b>RePEc: Research Papers in Economics</b>	Economics	Free	IDEAS: Federal Reserve Bank of St. Louis, EconPapers: Örebro University School of Business
<b>PhilPapers</b>	Philosophy	Free	PhilPapers
<b>ERIC: Educational Resource Information Center</b>	Education	Free & Subscription	United States Department of Education (available by subscription from OCLC, CSA)
<b>Synthical</b>	Multidisciplinary	Free	Synthical

### ***METADATA SERVICES***

<b>Name</b>	<b>Discipline(s)</b>	<b>Access cost</b>	<b>Provider(s)</b>
<b>AGRIIS: Agricultural database</b>	Agriculture	Free	FAO
<b>Arachne</b>	Archaeology, Art history	Free	DAI & University of Cologne
<b>AMiner</b>	Computer Science	Free	Tsinghua University
<b>Arts &amp; Humanities Citation Index</b>	Arts, Humanities	Subscription	Clarivate Analytics
<b>Astrophysics Data System</b>	Astrophysics, Geophysics, Physics	Free	Harvard University
<b>ATLA Religion Database</b>	Religious studies	Subscription	EBSCO Publishing
<b>BASE: Bielefeld Academic Search Engine</b>	Multidisciplinary	Free	Bielefeld University
<b>Book Review Index Online</b>	Book reviews	Subscription	Thomson Gale
<b>Books in Print</b>	Books	Subscription	R. R. Bowker
<b>CAB Abstracts</b>	Applied life sciences	Subscription	CABI

*More Info:*

<b>S.No.</b>	<b>Name</b>	<b>Subject Area</b>	<b>Access</b>	<b>Provider</b>
1	CINAHL	Nursing, Allied Health	Subscription	EBSCO
2	CORE	Multidisciplinary	Free	Open University
3	Crossref	Multidisciplinary	Free	Crossref
4	DeepDyve	Multidisciplinary	Free & Paid	DeepDyve
5	Dimensions	Multidisciplinary	Free & Paid	Digital Science

6	DOAJ	Multidisciplinary	Free	IS4OA
7	EconBiz	Economics	Free	ZBW, Germany
8	EconLit	Economics	Subscription	AEA
9	EMBASE	Biomedicine, Pharmacology	Subscription	Elsevier
10	FSTA	Food & Nutrition	Subscription	IFIS
11	GeoRef	Geosciences	Subscription	AGI
12	Google Scholar	Multidisciplinary	Free	Google
13	Informit	Multidisciplinary	Subscription	RMIT
14	Inspec	Science & Tech	Subscription	IET
15	INIS	Nuclear Sciences	Free	IAEA
16	Phil. Bibliography	Philosophy	Subscription	Louvain / Peeters
17	J-Gate	Multidisciplinary	Free & Paid	Informatics India
18	The Lens	Multidisciplinary	Free & Paid	Cambia
19	MathSciNet	Mathematics	Subscription	AMS
20	MEDLINE	Medicine	Free	NLM
21	MyScienceWork	Multidisciplinary	Free	MyScienceWork
22	NDL Collection	Multidisciplinary	Free	National Diet Library
23	OAIster	Multidisciplinary	Free	OCLC
24	OpenAIRE Graph	Multidisciplinary	Free	OpenAIRE
25	OpenAlex	Multidisciplinary	Free	OurResearch
26	PsycINFO	Psychology	Subscription	APA
27	PubMed	Biomedicine	Free	NIH/NLM
28	RSWBplus	Civil Engg., Architecture	Subscription	Fraunhofer IRB
29	Russian Sci. Citation	Multidisciplinary	Free	eLibrary.ru
30	ScienceOpen	Multidisciplinary	Free	ScienceOpen
31	Scopus	Multidisciplinary	Subscription	Elsevier
32	Web of Science	Multidisciplinary	Subscription	Clarivate
33	Zasshi Kiji Sakuin	Japanese Journals	Free & Paid	National Diet Library
34	Zentralblatt MATH	Mathematics	Free	FIZ Karlsruhe
35	Zoological Record	Zoology	Subscription	Clarivate

***SMALLER METADATA SERVICE***

Name	Subject	Access & Provider
Academic Search	Multidisciplinary	Subscription – EBSCO
Aerospace & High Tech DB	Aerospace, Aeronautics	Subscription – ProQuest
AJOL	Multidisciplinary	Free & Subscription – AJOL

AgeLine	Sociology, Gerontology	Subscription – EBSCO
AGRICOLA	Agriculture	Free (NAL) & Subscription (ProQuest, OVID)
Analytical Abstracts	Chemistry	Subscription – RSC
Anthropological Index Online	Anthropology	Free & Subscription – RAI
Anthropological Literature	Anthropology, Archaeology	Free & Subscription – Harvard / OCLC
ArchiveGrid	Multidisciplinary	Free – WorldCat
ASCE Library	Civil Engineering	Free & Subscription – ASCE

*More information*

<b>Name</b>	<b>Subject</b>	<b>Access &amp; Provider</b>
AULIMP	Military Science	Free – Air University
Biological Abstracts	Biology	Subscription – Thomson Reuters
Chemical Abstracts Service	Chemistry	Subscription – ACS
Chinese Social Sciences CI	Social Sciences	Subscription – Nanjing University
Civil Engineering Database	Civil Engineering	Free – ASCE
Current Contents	Multidisciplinary	Subscription – Clarivate Analytics
Index Copernicus	Multidisciplinary	Free – Index Copernicus Ltd
Information Bridge (DOE)	Multidisciplinary	Free – DOE (OSTI)
Indian Citation Index	Multidisciplinary	Subscription – ICI
IARP	Multidisciplinary	Free – Volunteer Collaboration
INSPIRE-HEP	Physics (High Energy)	Free – CERN, DESY, Fermilab, SLAC, IHEP
LexisNexis	Law	Subscription – Reed Elsevier
ORCID	Multidisciplinary	Free – ORCID Inc.
PDC eCollection	Philosophy, Ethics, Religion	Free & Subscription – Philosophy Documentation Center
POIESIS	Philosophy, Ethics, Religion	Free & Subscription – Philosophy Documentation Center
Publons	Multidisciplinary	Free – Clarivate Analytics
PubPsych	Psychology	Free – Leibniz Institute for Psychology Info
Readers' Guide	Literature	Subscription – H. W. Wilson Co.
Rock's Backpages	Music	Free & Subscription – Backpages Ltd
SafetyLit	Multidisciplinary	Free – SafetyLit Foundation
Science.gov	Multidisciplinary	Free – U.S. Government

Science Citation Index	Multidisciplinary	Subscription – Clarivate Analytics
SCIndeks	Multidisciplinary	Free – CEON/CEES (Serbia)
SNAC	Multidisciplinary	Free – (No specific provider mentioned)
Soc. Sciences Citation Index	Social Sciences	Subscription – Clarivate Analytics
Socolar	Multidisciplinary	Free & Subscription – CEPIEC (China)
Ulrich's Periodicals Directory	Multidisciplinary	Subscription – ProQuest
WestLaw	Law	Subscription – Thomson Reuters
WorldCat	Multidisciplinary	Free & Subscription – OCLC Inc.
WorldWideScience	Multidisciplinary	Free & Subscription – DOE (OSTI)

### ***LIST OF PUBLISHERS***

<b>Name</b>	<b>Discipline(s)</b>	<b>Access cost</b>	<b>Provider(s)</b>
<b>Association for Computing Machinery Digital Library</b>	Computer Science, Engineering	Subscription	Association for Computing Machinery
<b>Analytical Sciences Digital Library</b>	Analytical chemistry	Free	NSDL and ACS
<b>Bibliographie de civilisation médiévale</b>	Medieval studies	Subscription	University of Poitiers (available from Brepols Publishers)
<b>BioOne</b>	Biology, Ecology, Environmental Science	Free & Subscription	BioOne
<b>IEEE Xplore</b>	Computer Science, Engineering, Electronics	Subscription	IEEE
<b>IngentaConnect</b>	Multidisciplinary	Free & Subscription	Ingenta
<b>JSTOR: Journal Storage</b>	Multidisciplinary	Free & Subscription	JSTOR
<b>OpenEdition.org</b>	Humanities, social science	Free	Cléo (UMS 3287) CNRS EHESS University of Avignon
<b>Project MUSE</b>	Humanities, social science	Subscription	Project MUSE, Johns Hopkins University Press
<b>SciELO</b>	Multidisciplinary	Free	FAPESP, CNPq and BIREME
<b>ScienceDirect</b>	Science including Medicine	Subscription	Elsevier

***LIST OF BIOGRAPHICAL RESOURCES***

<b>Site</b>	<b>Language</b>	<b>Description</b>	<b>Access</b>
Afro-American Encyclopaedia	English	Classic historical encyclopedia (1895)	Free
Australian Dictionary of Biography	English	Entries on notable Australians who have died	Free
Croatian Biographical Lexicon	Croatian	Multi-volume biographical reference work on notable figures from Croatian history	Free
Deutsche Biographie	German	Biographies on notable German speaking people	Free
American National Biography	English	Biographies of notable Americans	Subscription
Dictionary of Irish Architects	English	Biographical information on Irish architects from 1720 to 1940	Free
Kdo byl kdo	Czech	Biographies on notable Czech and Slovak people	Free
Österreichisches Biographisches Lexikon 1815–1950	German	Biographies on notable Austrians	Free
Oxford Dictionary of National Biography	English	Comprehensive 66-volume reference work on notable figures from British history	Subscription
Dictionary of New Zealand Biography	English, Māori	Entries on notable New Zealanders who have died	Free
Dizionario Biografico degli Italiani	Italian	Biographical Dictionary of Italian People, published by the Istituto dell'Enciclopedia Italiana Treccani	Free

***FINANCIAL ESTIMATION METHODS***

Method	Description	Recommended Amounts
<b>Per Capita Method</b>	-Minimum amount per member estimated based on standard library service. -Suggested to revise amounts to at least three times due to rising costs.	- University: Rs. 25/student, Rs. 300/teacher - School: Rs. 50/student, Rs. 150/teacher
<b>Proportional Method</b>	-Norm laid down based on total educational budget. -Allocated based on the development stage of each university library.	- University: 6.5% to 10% of educational budget - School: 6% of expenditure on school education
<b>Method of Details</b>	-All items of expenditure accounted for using standards for each item. -5% of book costs for stacking, storing, and servicing. -Norms fixed for initial grants to build the basic collection for newly started university libraries.	- Books: Rs. 15/student, Rs. 200/teacher

***WEEDING OUT LIBRARY MATERIALS***

Aspect	Details
<b>Who Should Weed Out?</b>	- The librarian should be directly involved, with decisions possibly supported by Library Committee members, library authority nominees, or a specially appointed committee. - Subject experts or senior faculty members can also provide trusted advice.
<b>Guidelines for Weeding Out</b>	- Consider if the item can be replaced with a new copy, edition, or book on the subject. - Anticipate future needs for the document if removed.
<b>Theories on Weeding</b>	- <b>Fussler and Simon:</b> Past use is the best indicator of future use. - <b>Trueswell:</b> Developed a method to weed out items while maintaining a satisfaction rate based on past use. - <b>Raffel and Shishko:</b> Suggest using the publication date as a key criterion.
<b>Guidelines by Organizations</b>	- <b>American Library Association (ALA):</b> Recommends annual withdrawals averaging at least 5% of the total collection. - <b>Sinha Committee Report (1958):</b> For Indian public libraries, suggests discarding 5% of fiction and 2% of non-fiction each year.
<b>Ranganathan's Observations</b>	- Books that become outdated in ideas within 20 years should be weeded out and written off.
<b>Handling Weeded Materials</b>	- <b>Damaged or irreparable items:</b> Can be sold similarly to old newspapers. - <b>Good-condition items:</b> Consider donating to libraries unable to afford such materials. - <b>Book Reservoirs:</b> Store useful weeded items regionally as reserves, preserving copies for research and future needs.
<b>Record Keeping</b>	- Ensure weeding is sanctioned by the Library Committee or authority. - Update the Accession Register to mark the item as "written off" with relevant orders.

	- Delete entries from shelf lists, catalogues, and other records to reflect the removal.
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### ***CATEGORIES OF STAFF IN ACADEMIC LIBRARIES***

<b>Category</b>	<b>Roles</b>	<b>Responsibilities</b>
<b>Professional Staff</b>	Positions: Professional Assistant, Assistant Librarian, Deputy Librarian, Librarian	<ul style="list-style-type: none"> <li>- Book selection</li> <li>- Book order</li> <li>- Classification</li> <li>- Cataloguing</li> <li>- Indexing</li> <li>- Abstracting</li> <li>- Reference service</li> <li>- Information service</li> <li>- Planning</li> </ul>
<b>Supporting (Technical) or Paraprofessional Staff</b>	Positions similar to para-medical staff like nurses, technicians Education: Certificate or diploma (undergraduate) in Library Science	<ul style="list-style-type: none"> <li>- Preparation of book selection slips</li> <li>- Accessioning of books</li> <li>- Registration of periodicals</li> <li>- Typing catalogue cards, bibliographies</li> <li>- Volume numbering</li> <li>- Charging/discharging books</li> <li>- Issue records maintenance</li> <li>- Inter-library loan work</li> <li>- Shelving documents</li> <li>- Preparation for binding</li> <li>- Stock-taking</li> </ul>
<b>Supporting (Administrative) Staff</b>	General office support in a library	<ul style="list-style-type: none"> <li>- Secretarial assistance to librarians and senior staff</li> <li>- Personnel records maintenance</li> <li>- Accounts management (salaries, purchases, bills)</li> <li>- Stores maintenance (purchase, stock registers)</li> <li>- Typing (except catalogue cards, bibliographies)</li> <li>- Housekeeping and sanitary duties</li> </ul>

**UGC LIBRARY COMMITTEE STAFFING RECOMMENDATIONS**

<b>Section</b>	<b>Initial Staff Requirement</b>	<b>Later Changes Suggested by Dr. S.R. Ranganathan</b>
<b>Book Section</b>	One person for every 6,000 volumes added annually	No change
<b>Periodical Publications Section</b>	One person for every 500 current periodicals	Revised to one person for every 1,500 periodicals subscribed
<b>Documentation Section</b>	One person for every 1,000 entries prepared annually	Revised to 30 research workers for each university (to work alongside NISCAIR and abstracting services)
<b>Technical Section</b>	One person for every 2,000 volumes added annually	No change
<b>Maintenance Section</b>	<ul style="list-style-type: none"> <li>- One person for every 6,000 volumes added annually</li> <li>- One person for every 500 volumes to be replaced daily</li> <li>- One person for every 100,000 volumes in the library</li> </ul>	Revised to one person for every 1,500 volumes newly added and 50,000 volumes maintained
<b>Administrative Section</b>	Minimum of one library accountant, one steno-typist, and one correspondence clerk	No change
<b>Reference Section</b>	One person for every 50 readers daily (excluding textbook users)	No change
<b>Circulation Section</b>	One person for every 1,500 hours the library gate remains open annually	No change
<b>Supervisory Section</b>	One Librarian and one Assistant or Deputy Librarian	No change
<b>Unskilled Staff</b>	<ul style="list-style-type: none"> <li>- One cleaner per 30,000 volumes in the library</li> <li>- One attendant for every 6,000 volumes added annually</li> <li>- One attendant per 500 current periodicals</li> <li>- Additional attendants for shifts in the Circulation Section and other routine tasks</li> </ul>	No change

The staffing norms recommended by the **AICTE for technical institutions** and the suggested staffing patterns for **different levels of schools** in India:

**NORMS OF AICTE FOR TECHNICAL INSTITUTIONS**

<b>Library Staff Position</b>	<b>Required Staff</b>	<b>Initial Stock</b>
Librarian	1	4,000 volumes of books, 36 journals (18 national, 18 international)
Assistant Librarian	1	
Assistants	4	

(Source: Handbook of Norms and Standards of AICTE, 1999)

**AUTHORS AND BOOKS**

<b>Author(s)</b>	<b>Title</b>	<b>Pub.Year</b>	<b>Publisher/Editor</b>
<b>Johnson, Blmer D.</b>	<i>A History of Libraries in the Western World</i>	1965	Scarecrow
<b>Irwin, Irwin</b>	<i>Ancient and Medieval Libraries</i>	1968	Encyclopedia of Library and Information Science (A. Kent & H. Lancour, Eds)
<b>Mumford, William A. and Penny Rate</b>	<i>Aspects of British Public Library History, (1850-1950)</i>	1951	Library Association
<b>Shera, Jesse H.</b>	<i>Foundations of the Public Library: The Origins of the Public Library Movement in New England (1629-1855)</i>	1965	Shoestring Press
<b>Nelson Associates</b>	<i>Public Libraries in the United States: Trends, Problems, and Recommendations: A Report Prepared for the National Advisory Commission on Libraries</i>	1967	Nelson Associates
<b>Public Library Association</b>	<i>Standards Committee, Minimum Standards for Public Library Systems</i>	1966	ALA (American Library Association)
<b>Sherill, L.L.</b>	<i>Library Service for the Unnerved</i>	1969	Bowker
<b>Harrison, K.C.</b>	<i>Libraries in Scandinavia (2nd ed.)</i>	1969	Andrè Deutsch
<b>Kalia, D.R.</b>	<i>Guidelines for Public Library Services and Systems</i>	1990	RRR Library Foundation
<b>Kalia, D.R.</b>	<i>Public Libraries, In 50 Years: Library and Information Services in India</i>	1998	Shipra

**THE ROLE OF INTERNATIONAL ORGANIZATIONS LIKE UNESCO AND IFLA IN THE DEVELOPMENT OF PUBLIC LIBRARIES**

Aspect	Details
<b>International Organizations</b>	<b>UNESCO and IFLA (International Federation of Library Associations and Institutions)</b> have played significant roles in the development of public libraries. They have provided guidance, standards, and support for the global promotion of library services.
<b>UNESCO's Contribution</b>	<ul style="list-style-type: none"> <li>- <b>Delhi Public Library:</b> Established by UNESCO in 1951 as a model public library system to introduce the concept of free public libraries. It has since grown into a premier public library system in Delhi.</li> <li>- <b>UNESCO Library, Documentation and Information Services</b> in New Delhi provides <b>information support</b> to regional and country programs, aiding in the <b>sharing and exchange of information materials</b>.</li> <li>- Provides <b>online bibliographic searches</b> through the UNESCO New Delhi Library Database.</li> </ul>
<b>IFLA's Contribution</b>	<ul style="list-style-type: none"> <li>- <b>International Standards and Guidelines:</b> IFLA has created various documents for the promotion and development of public libraries, including:               <ol style="list-style-type: none"> <li>1) <b>UNESCO Public Library Manifesto (1972)</b> (revised in 1994).</li> <li>2) <b>IFLA Standards for Public Libraries (1973/1977)</b>.</li> <li>3) <b>Public Library Service: IFLA/UNESCO Guidelines for Development (2000)</b>.</li> <li>4) Standards and guidelines for specific library services, such as for <b>the blind, hospital patients, handicapped readers, ethnic and linguistic minorities, mobile libraries</b>, etc.</li> <li>5) <b>Measuring Performance of Public Libraries: A Draft Manual (1989)</b> by Nick More, developed by UNESCO.</li> </ol> </li> </ul>

**MODEL PUBLIC LIBRARY BILLS/ACTS IN INDIA**

Year	Model Public Library Act/Bill	Key Contributors	Revisions and Salient Features
<b>1930</b>	<b>Model Public Libraries Act</b>	Dr. S.R. Ranganathan	Revised in 1957 and 1972. Includes constitution of State Library Authority, State Library Committee, District Library Authority, library cess collection, and local body autonomy.
<b>1963</b>	<b>Model Public Library Bill</b>	Dr. M.D. Sen Committee, Ministry of Education	Establishment of State Library Council, State Library Directorate, and provision of funds from the state exchequer. Missing State Library Authority provision.
<b>1964</b>	<b>Model Public Library Bill</b>	Working Group of the Planning Commission, Govt. of India	Focused on public library systems.
<b>1989</b>	<b>Model Public Libraries Act (Indian Library Association)</b>	Indian Library Association	Revised in 1995 as Model Public Library and Information Services Act. Aimed at strengthening public library services and facilities.

2000	Model Union Public Library Act	Unknown	Revised to suit the requirements of the new millennium.
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### ***PUBLIC LIBRARY ACTS***

State	Year	Library Cess/Financial Source
Tamil Nadu	1948	Library cess (10% on property tax)
Andhra Pradesh	1960	Library cess (8% on property tax)
Karnataka	1965	Library cess (6% on lands, buildings, vehicles, and profession)
Maharashtra	1967	No library cess, state government grant
West Bengal	1979	No library cess, state government grant
Manipur	1988	No library cess, state government grant
Kerala	1989	Library cess (5% on property tax and not less than 1% of state expenditure on education budget)
Haryana	1989	Local bodies to levy cess
Goa	1993	Surcharge on IMFL @ 0.50 paise per litre, 0.50 paise on bulk beer per litre, and 1% on state education budget
Mizoram	1993	No library cess, state government grant
Gujarat	2001	No library cess, state government grant
Orissa	2001	No library cess, state government grant

### ***RANGANATHAN'S CONTRIBUTIONS TO PUBLIC LIBRARY DEVELOPMENT IN INDIA***

Contribution	Details and Year
Model Library Bill	Presented at the First All Asia Education Conference in Varanasi, adopted as the seed for library legislation in India. (1930)
Library Bills for Indian States	Drafted library bills for various states including Bengal, Bombay, Madras State, and others, leading to the enactment of laws in several states. (1931, 1946, 1947, 1950, 1957, 1958, 1960, 1965)
Library Laws Enacted During His Lifetime	Library laws were enacted in Tamil Nadu, Andhra Pradesh, and Mysore, based on his drafts. (1948 - Tamil Nadu, 1960 - Andhra Pradesh, 1965 - Mysore)
All India Seminar on Public Libraries	Made a fervent appeal for a Union Public Library Act, State Library Acts, National Central Libraries, and a National Grid of Public Library systems. (Last year of his life, 1972)
Library Development Plans	Developed plans such as the "Post-War Reconstruction of Libraries in India" and "National Library System," both shaping library development in India. (1944 - Post-War plan, 1946 - National Library System)
Advisory Committee for Libraries	His influence on the committee led to the 1959 report advocating for a 25-year library development plan and library laws in India. (1957 - Committee formed, 1959 - Report)

<b>Government of India Response</b>	The establishment of the Raja Rammohun Roy Library Foundation, promoting public libraries and supporting financial assistance for libraries. (1972)
<b>Library Associations</b>	Founded the Madras Library Association (MALA), served as its secretary, and was involved in the Indian Library Association (ILA), drafting its first constitution. (1928 - MALA founded, 1933 - ILA foundation, 1944-1953 - ILA president)
<b>Library Popularization Efforts</b>	Demonstrated the bullock cart library at Mannargudi and gave a powerful presidential address at the All-India Library Conference in Nagpur, advocating for library services. (1931 - Bullock cart library demonstration, 1949 - ILA Conference)

### ***IS STANDARDS AND OTHER GUIDELINES RELATED TO LIBRARY BUILDINGS***

<b>Standard/Guideline</b>	<b>Details</b>
<b>IS:2672-1996</b>	Code of practice for library lighting.
<b>IS:1829 (Part I) - 1978</b>	Specification for library furniture and fittings, Part I: Timber (first revision).
<b>IS:1829 (Part II) - 1977</b>	Specifications for library furniture and fittings, Part II: Steel.
<b>IS:1243-1958</b>	Recommendations for modular coordination of dimensions in the building industry.
<b>IS:1172-1957</b>	Code of basic requirements for water supply, drainage, and sanitation in library buildings.
<b>IS:1883-1957</b>	Metal shelving racks (adjustable type, second revision).
<b>IS:8338-1976</b>	Recommendations related to primary elements in the design of school library buildings.
<b>IS:3312</b>	Steel shelving cabinets (adjustable type, first revision).
<b>IS:4116-1976</b>	Wooden shelving cabinets (adjustable type, first revision).
<b>ISI (1977)</b>	Recommendations relating to primary elements in the design of library buildings.
<b>ISI:1553</b>	Code of practice relating to primary elements in the design of library buildings (1976).
<b>IFLA Standard for Public Libraries (Edn. 2, 1977)</b>	Standards for library buildings (pp. 38-53).
<b>IFLA Guidelines for Public Libraries (1986)</b>	Guidelines for public libraries, focusing on service points (Chapter IV, pp. 43-47).
<b>Ashburner, E.H. (1986)</b>	<i>Modern Public Libraries: Their Planning and Design</i> - A comprehensive guide on the planning and design of modern public libraries.

**INDIAN PUBLIC LIBRARY GUIDELINES**

Category	Specification
<b>Library Finance</b>	
Government Contribution	Central and state governments should allocate 6-10% of the education budget for libraries.
Library Cess	No definite recommendation for library cess, but a recommendation was made for a levy of ₹1 to ₹10 per annum by all public libraries.
<b>Administrative Machinery</b>	
National Commission	A National Commission on Library and Information Services should be established.
Bureau of Library Services	A Bureau of Library and Information Services should be created at the central level.
Directorates and Committees	State-level directorates of libraries and library committees should be established.
<b>Library Personnel</b>	
Central Libraries	One post per 2,000 literate population for central libraries at state/divisional/district/city levels.
Professional Staff	40% of the total staff in central libraries should be professional, compared to 33% in other public libraries.
Adequate Staff for Central Libraries	Staff should be provided for: (a) Administrative Services Division (b) Technical Services Division (c) Reader Service Division
<b>Building Specifications</b>	
Gross Area per 25,000 Population	21,520 sq. ft. (0.86 sq. ft. per person), in line with international standards, but exceptions apply for central libraries serving large areas.
Building Design Brief	A brief should be prepared by the librarian for: (a) Functional qualities of the building (b) Space for different divisions (c) Logical placement of sections
<b>Physical Facilities</b>	
Illumination	All floors should have uniform illumination levels.
Study Cubicles	No separate study cubicles should be provided.
Steel vs. Wooden Racks	Steel racks should be preferred over wooden racks in stack areas and reading rooms due to durability.
Book Capacity	Book capacity should be calculated at the rate of 120 volumes per 11 sq. ft. of floor area.
Furniture and Fittings	Specifications for library furniture and fittings are provided in detail by the guidelines.

***LIBRARY NETWORKS***

<b>Library Network</b>	<b>Key Features</b>
<b>Delhi Public Library (DPL)</b>	<ul style="list-style-type: none"> <li>- Busiest public library in Southeast Asia.</li> <li>- Developing Libraries Network (DELNET), formerly known as Delhi Library Network, established in 1988.</li> <li>- Compilation of Union Catalogues (Books, Periodicals, etc.) and multiple databases.</li> <li>- Provides e-mail services to 243 member libraries.</li> </ul>
<b>Calcutta Library Network (CALIBNET)</b>	<ul style="list-style-type: none"> <li>- First library network in India.</li> </ul>
<b>Madras Libraries Network</b>	<ul style="list-style-type: none"> <li>- Set up under INSDOC initiative for libraries in and around Chennai.</li> </ul>
<b>The Alliance Library System (ALS)</b>	<ul style="list-style-type: none"> <li>- Based in Illinois, USA.</li> <li>- Partnership of nearly 300 academic, public, school, district, and special/corporate libraries.</li> </ul>
<b>Western Library Network (WLN)</b>	<ul style="list-style-type: none"> <li>- Initially called Washington Library Network.</li> <li>- Started with 10 libraries in Washington State.</li> </ul>
<b>Research Libraries Information Network (RLIN)</b>	<ul style="list-style-type: none"> <li>- Consortium of research libraries, including Stanford University, California.</li> <li>- Dedicated to solving common problems in collection development, management, access, and preservation.</li> </ul>
<b>UTLAS International</b>	<ul style="list-style-type: none"> <li>a) <b>1965–1975</b> – Typed catalogue cards at the University of Toronto Library (UTL) were converted into a <b>searchable online catalogue</b>.</li> <li>b) <b>1967</b> – <b>Systems Department</b> was established at UTL to develop computing and automation services.</li> <li>c) <b>1971</b> – <b>UTLAS</b> (University of Toronto Library Automation System) was introduced, offering innovative automation services to libraries worldwide.</li> <li>d) <b>1976 (July 1)</b> – Traditional <b>card catalogues</b> at Robarts Library were <b>officially closed down</b>.</li> <li>e) <b>1984</b> – <b>UTLAS was sold to Thompson International</b>.</li> </ul>
<b>BLAISE (British Library Automated Information Services)</b>	<ul style="list-style-type: none"> <li>- One of the world's largest networks.</li> <li>- Offers online services:               <ol style="list-style-type: none"> <li>1) BLAISE-LINK (biomedical and toxicology info in MEDLINE, TOXLINE).</li> <li>2) BLAISE-LINE (bibliographical data in all subjects).</li> <li>3) BLAISE-RECORDS (records from OCLC).</li> </ol> </li> </ul>

**RANGANATHAN'S GENERAL STAFF FORMULA**

Staff Type	Formula	Explanation
Professional Staff	$SB + SE + SL + SM + SP + SR + ST$	Sum of staff required in various professional roles
Non Professional Skilled Staff	$\frac{B}{30,000} + \frac{S}{100}$	Based on book and staff ratios for skilled roles
Unskilled Staff	$\frac{SB}{4} + \frac{SC}{2} + SL + \frac{SM}{4} + \frac{SP}{2} + \frac{SR}{8}$ $\frac{A}{20,000} + \frac{D}{500} + \frac{B}{60,000} + \frac{S}{100} + \frac{V}{30,000}$	Based on ratios and workload in various sections

**Explanation of Variables in Staff Formula of S.R Ranganathan**

Variable	Description	Formula
SB	Number of persons in book section	$A/6000$
A	Number of books accessioned in a year	-
SC	Number of persons in circulation section	$G/1500$
G	Number of gate-hours for a year	-
SL	Number of persons as librarian and deputies	$HW/1500$
HW	(Library hours per day) x (Working days per year)	-
SM	Number of persons in maintenance section	$A/3000$
SP	Number of persons in periodicals section	$P/500$
P	Number of periodicals currently taken	-
SR	Number of persons in reference section	$(R/150) \times (W/250)$
R	Number of readers per day	-
W	Number of working days	-
ST	Number of persons in technical section	$(A + 40D)/2000$
D	Number of periodicals abstracted and indexed in a year	-

**UGC LIBRARY COMMITTEE STAFFING NORMS**

Library Section	Staff Requirement
Book Section	1 person for every 6,000 volumes added in a year
Periodical Publications Section	1 person for every 500 current periodicals taken
Documentation Section	1 person for every 1,000 entries prepared in a year
Technical Section	1 person for every 2,000 volumes added in a year
Maintenance Section	1 person for every 6,000 volumes added in a year, 1 person for every 500 volumes to be replaced daily, and 1 person for every 100,000 volumes in the library
Administrative Section	Minimum of 1 library accountant, 1 steno-typist, and 1 correspondence clerk
Reference Section	1 person for every 50 readers (excluding textbook collection users) per day
Circulation Section	1 person for every 1,500 hours of gate operation per year

<b>Supervisory Section</b>	1 Librarian and 1 Assistant or Deputy Librarian
<b>Unskilled Staff</b>	1 Cleaner for every 30,000 volumes, 1 Attendant for every 6,000 volumes added per year, every 500 periodicals taken, and each shift in the Circulation Section
<b>Revised Norms (as per Ranganathan's suggestions)</b>	<b>Updated Requirements</b>
<b>Periodical Publications Section</b>	1 person for every 1,500 periodicals subscribed
<b>Documentation Section</b>	1 person for every 30 research workers (to supplement INSDOC/NISCAIR and international abstracting services)
<b>Maintenance Section</b>	1 person for every 1,500 newly added volumes, and 1 person for every 50,000 volumes maintained

### UGC WORKSHOP (KHANDALA) 1979 RECOMMENDATIONS FOR COLLEGE LIBRARY STAFFING

Category	Staff Requirement
<b>Basic Staff for College Library For a college with 500 students and 5,000 volumes:</b>	
Librarian	1
Assistant Librarian	1
Library Assistant	2
Library Clerk-cum-Typist	1
Library Attendants	3
<b>Total Basic Staff</b>	8
<b>Additional Staff Requirements: Based on college size and library collection growth:</b>	
For every additional 500 students	1 Library Assistant and 2 Library Attendants
For every additional 25,000 volumes (up to 80,000 volumes)	1 Library Assistant and 2 Library Attendants
When student enrollment exceeds 2,000	1 additional Assistant Librarian and 1 additional Library Clerk

### UGC-SANCTIONED STAFF REQUIREMENTS FOR DELHI UNIVERSITY DAY AND EVENING COLLEGE LIBRARIES

Position	Day College Library Staff (up to 15,000 Volumes)	Day College Library Staff (15,000-30,000 Volumes)	Day College Library Staff (30,000+ Volumes)	Evening College Library Staff (up to 15,000 Volumes)	Evening College Library Staff (30,000+ Volumes)
<b>Librarian</b>	1	1	1	1	1
<b>Professional Assistant</b>	1	1	1	-	-
<b>Library Assistant</b>	2	2	2	2	2
<b>Typist</b>	1	1	1	1	1

<b>Attendants</b>	2	3	4	2	4 (50% in senior scale)
<b>Additional Staff</b> If college enrollment > 1,500 students 2 additional attendants are provided for day college libraries If library operates for 12 hours 2 additional attendants for day college libraries					

### ***PLAGIARISM DETECTION SOFTWARE***

Software	Developer	First Public Release	License	Deployment Options
<b>Copyscape</b>	Indigo Stream Technologies, Ltd.	2004	Freemium	SaaS
<b>Grammarly</b>	Grammarly, Inc.	2016	Freemium	SaaS
<b>HelioBLAST</b>	Virginia Bioinformatics Institute		Free of charge	Web service
<b>iThenticate</b>	iParadigms	2004	Proprietary	SaaS
<b>PlagScan</b>	PlagScan GmbH	2008	Limited	SaaS, On-Premises
<b>PlagTracker</b>	Devellar	2011	Freemium	SaaS
<b>Turnitin</b>	iParadigms	1997	Proprietary	SaaS
<b>Unicheck</b>	Unicheck	2014	Proprietary	SaaS

### ***DRILLBIT PLAGIARISM DETECTION SOFTWARE***

Aspect	Details
<b>Software Name</b>	DrillBit Plagiarism Detection Software
<b>Developer</b>	DrillBit SoftTech India Pvt Ltd.
<b>Company Location</b>	Bangalore, India
<b>Year Founded</b>	2016
<b>Product Type</b>	Cloud-based Plagiarism Detection Software
<b>Target Audience</b>	Students, Researchers, Faculties/Professors/Teachers
<b>Technology Used</b>	AI and ML technology, Proprietary AI-based matching algorithm
<b>Functionality</b>	Detects similarities, manipulations, and text formatting irregularities
<b>Compliance</b>	ISO 27001:2013, SOC 2 Type II, GDPR
<b>Recognition</b>	Evaluated by AICTE technical expert committee, selected for empanelment with AICTE NEAT 3.0
<b>Key Event</b>	MoU signing ceremony with AICTE, NAAC, and other dignitaries on 29th July 2023 at Pragati Maidan, New Delhi

### **IMPORTANT QUOTES**

Quote/Concept	Said By
"Some books are to be tasted, others to be swallowed, and some few to be chewed and digested."	Francis Bacon
"To provide the best books to the maximum readers at the least cost."	Melvil Dewey

<p>Shera's Two Laws of Cataloguing:</p> <ol style="list-style-type: none"> <li>1. No cataloger will accept the work of any other cataloger.</li> <li>2. No cataloger will accept his/her own work six months after cataloging.</li> </ol>	Jesse Shera
"Censorship, like charity, should begin at home; but unlike charity, it should end there."	Clare Booth Luce
"Knowing that I loved my books, he furnished me, from mine own library with volumes that I prize above my dukedom."	William Shakespeare (The Tempest, Act I, Scene II)
"Libraries are the wardrobes of literature, whence men, properly informed, may bring forth something for ornament, much for curiosity, and more for use."	William Dyer
"A library book...is not, then, an article of mere consumption but fairly of capital."	Thomas Jefferson
"Libraries are as the shrines where all the relics of the ancient saints are preserved and reposed."	Francis Bacon
<p>New Laws of Librarianship:</p> <ul style="list-style-type: none"> <li>- Libraries serve humanity.</li> <li>- Respect all forms by which knowledge is communicated.</li> <li>- Use technology intelligently to enhance service.</li> <li>- Protect free access to knowledge.</li> <li>- Honor the past &amp; create the future.</li> </ul>	Michael Gorman
<p>Ranganathan's Five Laws:</p> <ol style="list-style-type: none"> <li>1. Books are for use.</li> <li>2. Every reader his book.</li> <li>3. Every book its reader.</li> <li>4. Save the time of the reader.</li> <li>5. A library is a growing organism.</li> </ol>	S.R. Ranganathan
"Information is the manager's main tool, indeed the manager's 'capital,' and it is he who must decide what information he needs and how to use it."	Peter F. Drucker
"Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?"	T.S. Eliot
"A democratic society depends upon an informed and educated citizenry."	Thomas Jefferson
"Information is the currency of democracy."	Thomas Jefferson
"There is not such a cradle of democracy upon the earth as the Free Public Library."	Andrew Carnegie
"No place affords a more striking conviction of the vanity of human hopes than a public library."	Samuel Johnson
"Order is heaven's first law."	W.C.B. Sayers
"Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information upon it."	Dr. Samuel Johnson
"There is far greater peril in buying knowledge than in buying meat and drink."	Plato
"Nothing could be more damaging to a growing department than to neglect its library or give it a low priority."	The Kothari Education Commission
"The notation does not make a classification, but it may mar it."	H.E. Bliss
"Burn the libraries, for their value is in this one book (the Koran)."	Caliph Omar
"Knowledge comes, but wisdom lingers."	Alfred Tennyson
"Reference is to library service, what intelligence is to the military."	Louis Shores
"Its ideal should be: If a book is here, it's good; if it's good, it's here."	Francis K.W. Drury

"All creation is the most beautiful of books."	Martin Luther
"The library is the heart of all the university's work."	Dr. S. Radhakrishnan (University Education Commission)
"Demand for books should be differentiated according to its value, volume, and variety."	L.R. McColvin
"We need libraries founded by the people, supported by the people, enjoyed by the people."	William Ewart
"Bibliography is an art and also a science."	Arundell Esdaile
"Information science contributes to the theoretical base for the librarian's operations."	Jesse H. Shera
"There is no greater sin than the omission of an index."	E.B. Osborn
"It should be our endeavor to locate at least one library in every village."	Pt. Jawaharlal Nehru
"Students were the body of the university, the administration was the head, the teachers were the soul, and the library the heart."	Dr. C.D. Deshmukh
"Classification made the ape a man."	E.C. Richardson
"I choose free libraries as the best agencies for improving the masses of the people."	Andrew Carnegie
"Book classification is a mechanical time-saving operation for the discovery of knowledge."	Wyndham Hulme
"Books are the legacies that a great genius leaves to mankind."	Joseph Addison
"Best books in the largest number at the least cost."	Melvil Dewey

### ***IMPORTANT MARC TAGS***

<b>Tag Group</b>	<b>Description</b>	<b>Examples</b>
<b>0XX</b>	Control info, classification, codes, etc.	<b>020:</b> International Standard Book Number, <b>022:</b> International Standard Serial Number
<b>1XX</b>	Main entries	<b>100:</b> Main Entry - Personal Name, <b>110:</b> Main Entry - Corporate Name
<b>2XX</b>	Titles, edition, imprint	<b>240:</b> Uniform Title, <b>245:</b> Title Statement
<b>3XX</b>	Physical description, etc.	<b>300:</b> Physical Description, <b>310:</b> Current Publication Frequency
<b>4XX</b>	Series statements	-
<b>5XX</b>	Notes	<b>504:</b> Bibliography, Etc. Note, <b>520:</b> Summary, Etc.
<b>6XX</b>	Subject access fields	<b>600:</b> Subject Added Entry - Personal Name, <b>650:</b> Subject Added Entry - Topical Term
<b>7XX</b>	Added entries	<b>700:</b> Added Entry - Personal Name, <b>710:</b> Added Entry - Corporate Name
<b>8XX</b>	Series added entries, holdings, location, etc.	<b>800:</b> Series Added Entry - Personal Name, <b>852:</b> Location
<b>9XX</b>	Locally defined uses	900 - Equivalence or Cross-Reference Personal Name (R) 910 - Equivalence or Cross-Reference Corporate Name (R)

*Examples of Key Fields:*

Field Code	Field Name
100	Main Entry - Personal Name (NR)
110	Main Entry - Corporate Name (NR)
245	Title Statement (NR)
250	Edition Statement (NR)
260	Publication, Distribution, etc. (Imprint) (R)
300	Physical Description (R)
504	Bibliography, Etc. Note (R)
520	Summary, Etc. (R)
600	Subject Added Entry – Personal Name (R)
700	Added Entry – Personal Name (R)
856	Electronic Location and Access (R)

***LIBRARY SOFTWARE'S***

Software	Development/Release Details
<b>KOHA</b>	First open-source library automation package. Developed in 1999 by Katipo Communication Ltd, New Zealand, for Horowhenua Library Trust; first implemented in January 2000.
<b>NewGenLib</b>	Library automation software developed in India. Developed by Kesavan Institute of Information and Knowledge Management (KIIKM) and Verus Solutions Pvt Ltd in March 2005. Initially proprietary, became open source on January 9, 2008.
<b>Evergreen</b>	Initiated in September 2006 by Georgia Public Library System (GPLS) to support Public Information Network for Electronic Services (PINES). Open-source consortia-quality ILS.
<b>CDS/ISIS</b>	Developed in 1985. Integrated menu-driven software package by UNESCO.
<b>SOUL</b>	<b>SOUL 1.0:</b> Released during CALIBER 2000; <b>SOUL 2.0:</b> Released January 2009; <b>SOUL 3.0:</b> Released February 2021. Compliant with MARC 21, Unicode, NCIP 2.0, SIP 2 protocols. Compatible with MS-SQL and MySQL. Integrated library management software by INFLIBNET Centre, India.
<b>VTLS</b>	Developed in 1985 by Dr. Vinod Chachra at Virginia Tech. First to implement linked Authority Control, US MARC Format for Holdings and Locations, multilingual interfaces.
<b>Mandarin M5</b>	Latest version <b>M5 v5.8.0</b> released November 2024. Advanced cataloging, improved performance, responsive mobile interface, compatibility with Microsoft Edge, RIS format support. Web-based library management system offering global access through web browsers.
<b>Libsys</b>	<ol style="list-style-type: none"> <li>1. Founded in 1984 by Anil Jain; major milestones include RFID system (2003), LSNetX DIY e-commerce platform (2015). <b>LSEase:</b> A library management system based on client-server architecture, requiring minimal data entry and offering easy data backup for large databases.</li> <li>2. <b>LSAcademia:</b> A total ERP solution for managing academic campuses, available in two editions: School Edition and Standard Edition.</li> <li>3. <b>LIBSYS7:</b> A library management solution designed to enhance the complete library experience with value-added features and services.</li> </ol>

	<p>4. <b>LSDigital (DRMS)</b>: A document digitization software for multi-access management, storage space reduction, and preservation.</p> <p>5. <b>LSmart</b>: Solutions based on RFID and Em technologies.</p> <p>6. <b>LSNet.in</b>: An online bookstore with a comprehensive database based on an eCommerce platform.</p> <p><b>LSNetX.com</b>: A DIY E-commerce platform for offline businesses to go online.</p>
<b>E- Granthalaya</b>	<p>A digital platform developed by the <b>National Informatics Centre (NIC), Ministry of Electronics and Information Technology, Government of India</b> for government libraries.</p> <p><b>Version History:</b></p> <ol style="list-style-type: none"> <li><b>Version 1.0 (2003):</b> <ul style="list-style-type: none"> <li><b>Technology/Platform</b>: Visual Basic 6/ASP/HTML</li> <li><b>DBMS</b>: MS SQL Server 7</li> <li><b>Edition</b>: Public Library Edition</li> </ul> </li> <li><b>Version 2.0 (2005):</b> <ul style="list-style-type: none"> <li><b>Technology/Platform</b>: Visual Basic 6/ASP/HTML</li> <li><b>DBMS</b>: MS SQL Server 2000</li> <li><b>Edition</b>: Government Libraries Edition</li> </ul> </li> <li><b>Version 3.0 (2007):</b> <ul style="list-style-type: none"> <li><b>Technology/Platform</b>: VB.NET/ASP.NET 2.0</li> <li><b>DBMS</b>: MS SQL Server 2005</li> <li><b>Edition</b>: Network Edition</li> </ul> </li> <li><b>Version 4.0 (2015):</b> <ul style="list-style-type: none"> <li><b>Technology/Platform</b>: ASP.NET 4.0/AJAX/JQUERY/JSON/SilverLight</li> <li><b>DBMS</b>: PostgreSQL (Open Source)</li> <li><b>Edition</b>: Enterprise Edition</li> </ul> </li> </ol>
<b>SANJAY</b>	<ol style="list-style-type: none"> <li><b>Based on CDS/ISIS (Version 2.3)</b>: CDS/ISIS, originally developed by the International Labour Office in 1964 for IBM 360 mainframes, was later rewritten by UNESCO.</li> <li><b>Development</b>: A team from <b>DESIDOC</b> created SANJAY by adding: <ul style="list-style-type: none"> <li><b>35 PASCAL programs</b></li> <li><b>25 additional menus</b></li> </ul> Integrated these with CDS/ISIS to form the SANJAY package. </li> </ol>
<b>MAITRAYEE</b>	<ol style="list-style-type: none"> <li><b>Developed by</b>: CMC Ltd. for the <b>CALIBNET</b> project.</li> <li><b>Purpose</b>: Designed for library computerization for participating libraries in the <b>CALIBNET</b> network.</li> <li><b>Commissioned by</b>: <b>NISSAT</b>, a government agency.</li> </ol>
<b>PMB (PhpMyBibli)</b>	<ol style="list-style-type: none"> <li>PMB (PhpMyBibli) is an open-source Integrated Library System (ILS).</li> <li>Started by François Lemarchand in October 2002 as the Director of the Public Library of Agneaux, France.</li> <li>Currently managed by PMB Services.</li> <li>Web-enabled ILS using XAMP architecture (supports multiple operating systems).</li> <li>Includes Apache as the web server, PHP as the programming environment, and MySQL as the RDBMS.</li> <li>Employs AJAX to support an interactive and collaborative framework. First released in 2003.</li> </ol>

	<ol style="list-style-type: none"> <li>Initially available under the GNU GPL license.</li> <li>Now offered under the CeCILL free software license.</li> <li>The latest version (Version 8) introduces significant innovations.</li> <li>Integration of Artificial Intelligence in 2024 marks a major development in PMB</li> </ol>
<b>SLIM</b>	<p>Algorhythms Consultants is a leading provider of library and archive automation solutions. Headquartered in Pune, India, it has been offering technology solutions for library and archive management for over three decades (since 1986).</p> <p><b>Key Milestones in Algorhythms' Journey:</b></p> <ol style="list-style-type: none"> <li><b>1986:</b> SLIM DOS Library Management System</li> <li><b>1994:</b> SLIM++ Library Management System</li> <li><b>2001:</b> SLIM21 Standalone Library Management System</li> <li><b>2007:</b> SLIM Library RFID System</li> <li><b>2015:</b> iPROX21 eResource Access Management System</li> <li><b>2016:</b> iSLIM Web-based Library Management System</li> <li><b>2017:</b> iARCH Archival Management System</li> <li><b>2019:</b> SLIM OPAC Mobile Application, iSLIM Toy Library Management System</li> <li><b>2020:</b> iSLIM Cloud-based Library Management System</li> </ol>
<b>ABCD</b> (Automation of Libraries and Centres of Documentation.)	<ol style="list-style-type: none"> <li>TABCD is a comprehensive web-enabled integrated library automation system developed by BIREME, Brazil.</li> <li>The system uses CDS/ISIS as the backend database and WWWISIS as the middleware.</li> <li>The web interface for CDS/ISIS, known as WWWISIS, was developed by BIREME in 2005.</li> <li>In 2010, BIREME developed ABCD by utilizing CDS/ISIS as the database and WWWISIS as the CGI script to create a web-enabled Integrated Library System (ILS).</li> </ol>

Distribution Policy	Large Library Systems	Medium Range Library Systems	Small Library Systems
<b>Closed Source ILSs (Commercial)</b>	VIRTUA ILS , LibSys	SLIM 21, SOUL	AUTOLIB, NIRMALS
<b>Closed Source ILSs (Freeware)</b>	ABCD, WEBLIS	e-Granthalaya	LAMP, Librarian
<b>Open-Source ILSs (Freely Available)</b>	Evergreen ILS, Koha (version 3.x)	Koha (version 2.x), NewGenLib	Emilda, PHPMyLibrary

## IMPORTANT EVENTS

Year	Event
1942-46	First LC printed catalogue published (167 vols.)
1945	Dictionary Catalogue Code (Ranganathan)
1950	British National Bibliography (begins publication, classified arrangement using chain procedure of subject indexing)
1950	Farradane's Relational Indexing
1951	LC (Introduced 'limited cataloguing' policy ceased 1964)
1951	British Standard Institution (BS 1749: Specification for alphabetical arrangement and the filling order of numerals and symbols, 1st ed. published, 12th ed. 1969)
1953	Lubetzky (cataloguing rule and principles. Very important principles – 'conditions' rather than 'cases')
1953	Mortimer Taube's Uniterm Indexing
1954	IFLA Working Group on the coordination of Cataloguing Principles (ICCP was to blossom from this working party)
1955	Ranganathan's Headings and canons (Important comparative study of five codes of cataloguing rules)
1956	First printed cards from BNB.
1956	Filling Rule for the dictionary catalogs of the LC rewritten
1956	LC (Cataloguing In Source experiment now Cataloguing In Publication)
1958	KeyWord In Context (H.P.Luhn & H.Ohlman)
1959-1966	British Museum General catalogue published in photolitho edition (263 vols.)
1960	E.J.Coates Subject catalogues: headings and structure
1960	Lubetzky Code of cataloguing rules in unfinished draft
1961	First automated production of catalogue cards (The Douglas Aircraft Co. introduces the first cataloguing application of computers, although computers had been used with post-coordinate indexing since 1950s)
1961	Science Citation Index (Eugene Garfield from Institute for Scientific Information, Philadelphia, started from 1963)
1961	International Conference on Cataloguing Principles, Paris
1963	King report on automation and the LC led to MARC project
1965	The LC National Program for Acquisition and Cataloguing (NPAC) otherwise known as the 'Shared Cataloguing Program' began
1965	First computerization of catalogues in the UK (the public libraries of Camden and Barnet)
1966	Brasenose conference on the automation of libraries (computer can produce a 'reactive catalogue' that it can generate from a common bibliographic store a system of catalogues that are all mutually compatible)
1966	LC (Library of Congress) Project MARC begun
1967	AACR-I (Library Association/American Library Association/Canadian Library Association. Project of LC) (based upon 'conditions of authorship' and not types of publication)

Year	Event
1967	Permuted Subject Index
1967	Introduction of Standard Book Number in UK
1967	Attention focused on possibility of microform catalogues
1967	UK MARC project (BNB)
1967	OCLC network set up
1968	LC National Union catalogue began publication

1968	MARC II Project begun (LC)
1969	Origin of ISBD
1969	First UK network (BLCMP)
1969	PRECIS (Derek Austin)
1970	Introduction of ISBN & ISSN (International Standard Organization)
1970	Canadian rules for non-book materials
1971	CIP was started [LC]
1971	Introduction of International Standard Bibliographical Description (IFLA)
1971	PRECIS (Derek Austin) first used in BNB
1972	CCF Project begun (UNESCO)
1973	Library Association National Council for Educational Technology (LANCET) rules for non-book materials
1973	Books in English first published (An ultra-microfiche bibliography based upon MARC)
1974	ISBD introduced
1975	British Library formed
1975	UNESCO's initiatives for Bibliographic Exchange Format
1977	BLAISE goes live (British Library)
1977	UNIMARC Project begun (IFLA)
1978	AACR-II (Library Association/American Library Association/Canadian Library Association. Project of LC & BL) (Emphasizes integrated approach to cataloguing different library materials) <Condition Code>
1980	ALA filing rules (New version of 1968 rules) (American Library Association)
1980	BLAISE filing rules (British Library)
1980	LC filing rules
1981	British Library/Library of Congress/National Libraries of Canada and Australia adopted AACR-II

Year	Event
1981	LC policy of 'superimposition', whereby new rules are only used if they do not lead to conflict with existing headings, to be abandoned. Replaced by 'compatible headings'
1981	Concise AACR-II (Michael Gorman)
1982	Compatible headings policy of LC ceases
1982	Microcomputer applications in libraries for cataloguing and indexing becoming more widespread
1984	CCF 1st ed. Introduced (2nd ed. 1998 in two vols. CCF/B & CCF/F)
1988	AACR-II Revised Edition (Library Association/American Library Association/Canadian Library Association. Project of LC & BL)
1992-1995	The IFLA Study Group on Functional Requirements for Bibliographic Records (FRBR) developed an entity relationship model as a generalized view of the bibliographic universe, intended to be independent of any cataloging code (e.g. AACR2, the German RAK [Regeln für die alphabetische Katalogisierung] and RICA [Regole Italiane di Catalogazione per Autore] or implementation)
1993	AACR-II 2nd Revised Edition (Library Association/American Library Association/Canadian Library Association. Project of LC & BL)
1997	International Conference on the Principles and Future Development of AACR (organized by Joint Steering Committee (American Library Association, Australian Committee on Cataloguing, British Library, Canadian Committee on Cataloguing, Chartered Institute of Library and Information Professionals and Library of Congress))
2007	13 digit ISBN introduced

2009	Resource Description and Access (RDA) new standard which will be the successor to AACR2 (Kiorgaard & Kartus, Coyle & Hillman)
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## ***LIBRARY AND INFO SCIENCE RELATED IMPORTANT BOOKS***

### ***AUTHOR***

<b>No.</b>	<b>Book Title</b>	<b>Author/Editor</b>
1	Encyclopaedia of Librarianship	Thomas Landau (Editor)
2	Five Laws of Library Science	S.R. Ranganathan
3	Organisation of Knowledge in Libraries and Subject Approach to Books	Henry Evelyn Bliss
4	Grammar of Classification (4th ed., 1955)	W.C. Berwick Sayers
5	A History of Library Association 1877-1977	W.A. Munford
6	And Master of None (Autobiography, 1955)	Fremont Rider
7	Foundations of Education for Librarianship (1972)	Jasse H. Shera
8	A Librarian's Memories: Portraits and Reflections (1952)	E.A. Savage
9	Punjab Library Primer	Asa Don Dickinson
10	American Library Resources and British Library Resources	R.B. Downs
11	Memoirs of Libraries, including a Handbook of Library Economy	Edward Edwards (1858)
12	Studies in Co-ordinate Indexing (Vols. 1-6)	Mortimer Taube
13	Ranganathan: A Pattern Maker: A Syndetic Study of His Contributions	A.P. Srivastava
14	Manual of Library Classification and Shelf Arrangement	J.D. Brown (1898)
15	Sayer's Manual of Classification for Librarians (5th ed.)	Arthur Malthy (Editor)
16	Prolegomena to Library Classification (3rd ed., 1967)	S.R. Ranganathan
17	Principles of Book Classification	E. Wyndham Hulme
18	Simple Library Cataloguing	Susan G. Akers
19	List of Subject Headings for Small Libraries	M.E. Sears (Editor)
20	Rules for a Dictionary Catalogue	C.A. Cutter (1876)
21	A Modern Outline of Library Classification	J. Mills (1960)
22	Classification: Theoretical and Practical	E.C. Richardson (1901)
23	The Theory of Book Selection for Public Libraries	L.R. McColvin (1925)
24	Books That Changed the World	Robert Bingham Downs (1956)
25	Introduction to Cataloguing and the Classification of Books	Margaret Mann (1943)
26	Manual of Library Economy	J.D. Brown (Editor: R. Northwood Lock)
27	The BSO Manual: The Development, Rationale and Use of the Broad System of Ordering	Eric Coates, Geoffrey Lloyd, Dusan Simandl
28	Indian Library Literature: An Annotated Bibliography	Ram Gopal Prasher (1971)
29	Making of Librarianship in Pakistan	Syed Jalaluddin Haider (Editor)
30	March of Library Science: Kaula Festschrift	V. Venkatappaiah (Editor)
31	Library Science Today: Ranganathan Festschrift, Vol. I & II	Vol. I: P.N. Kaula, Vol. II: A.K. Dasgupta
32	The University Library: The Organisation, Administration, and Functions of Academic Libraries	Louis Round Wilson, Maurice F. Tauber
33	Decimal Classification and Colon Classification in Perspective	R.S. Parkhi

## DEWEY DECIMAL CLASSIFICATION

Year	Event/Activity	Details/Key People
1873–1885	Early development of Dewey Decimal Classification	Melvil Dewey develops classification system while at Amherst College.
1876	Publication of first edition	A Classification and Subject Index for Cataloguing and Arranging the Books and Pamphlets of a Library (44 pages).
1885	Second edition published	Decimal Classification and Relative Index (314 pages).
1891–1921	Editorial staff change	May Seymour becomes editor until her death in 1921.
1922	Lake Placid Club Educational Foundation takes over administration	Melvil Dewey's foundation manages administrative affairs.
1952	Establishment of Decimal Classification Editorial Policy Committee	Part of ALA's Cataloging and Classification division.
1949–1951	Editorial staff change	Milton Ferguson serves as editor.
1958	16th edition published	Edited under an agreement between Library of Congress and Forest Press.
1988	OCLC acquires Dewey Decimal Classification and Forest Press	Trademark and copyrights associated with Dewey Decimal Classification system.
2003	Trademark infringement case against Library Hotel	OCLC sues Library Hotel for using Dewey system as hotel theme, settled.
2017	Dewey Decimal Classification stops printing English edition	WebDewey becomes the primary format for updates.
1895–2012	Abridged editions published for small libraries	Abridged versions available, Abridged Edition 15 published in early 2012.
1894	First abridged edition of Dewey Decimal Classification published	Designed for smaller libraries.
1988–Present	OCLC maintains Dewey Decimal Classification system	Editorial staff based at Library of Congress and OCLC. Work reviewed by Decimal Classification Editorial Policy Committee.

*In addition to the full version, a single-volume abridged edition designed for libraries with 20,000 titles or fewer has been made available since 1895. The last printed English abridged edition, Abridged Edition 15, was published in early 2012.*

### DDC Editions

Full edition	Publication year	Abridged edition	Publication year
1st	1876		
2nd	1885		
3rd	1888		
4th	1891		
5th	1894	1st	1895
6th	1899		
7th	1911		
8th	1913	2nd	1915

9th	1915		
10th	1919		
11th	1922	3rd	1926
12th	1927	4th	1929
13th	1932	5th	1936
14th	1942	6th	1945
15th	1951	7th	1953
16th	1958	8th	1959
17th	1965	9th	1965
18th	1971	10th	1971
19th	1979	11th	1979
20th	1989	12th	1990
21st	1996	13th	1997
22nd	2003	14th	2004
23rd	2011	15th	2012

***DDC Main Classes***

<b>Class Number</b>	<b>Subject Area</b>
<b>000</b>	Computer Science, Information, and General Works
<b>100</b>	Philosophy and Psychology
<b>200</b>	Religion
<b>300</b>	Social Sciences
<b>400</b>	Language
<b>500</b>	Pure Science
<b>600</b>	Technology
<b>700</b>	Arts and Recreation
<b>800</b>	Literature
<b>900</b>	History and Geography

**6 Tables in DDC:**

<b>Table Number</b>	<b>Description</b>
<b>T1</b>	Standard Subdivisions
<b>T2</b>	Geographic Areas, Historical Periods, Biography
<b>T3</b>	Subdivisions for the Arts and Literatures
<b>T3A</b>	Subdivisions for Works by or about Individual Authors
<b>T3B</b>	Subdivisions for Works by or about More than One Author
<b>T3C</b>	Notation to Be Added Where Instructed in Table 3B, 700.4, 791.4, 808–809
<b>T4</b>	Subdivisions of Individual Languages and Language Families
<b>T5</b>	Ethnic and National Groups
<b>T6</b>	Languages

**Relative Index:**

*The Relative Index is an alphabetical index to the DDC system, helping users locate books by topic. It directs users to class numbers instead of page numbers, making it easy for catalogers and library users to find specific subjects in a Dewey-classed library.*

## COLON CLASSIFICATION

Year	Edition	Key Developments and Features
1924-1928	<b>Conceptualization &amp; Development</b>	Ranganathan conceives the Colon Classification (CC) and applies it at Madras University Library. He is inspired by the Meccano toy kit and mathematical techniques.
1933	<b>First Edition</b> (Published)	First official publication by Madras Library Association. First application of CC at Madras University Library.
1937	<b>Prolegomena to Library Classification</b>	Ranganathan publishes his foundational theory and methods for CC, outlining his principles in library classification.
1939	<b>Second Edition</b>	Refines and clarifies the theory and methods of CC, published after Ranganathan's Prolegomena to Library Classification.
1950	<b>Third Edition</b>	Published after Ranganathan's move to Delhi University. Further development of classification theory. Introduces CC to more libraries in Delhi.
1952	<b>Fourth Edition</b>	Introduces the theory of "five and only five fundamental categories" (PMEST: Personality, Matter, Energy, Space, and Time) to generalize facets across all classifications.
1957	<b>Fifth Edition</b>	Proposed as two volumes (basic and depth), but only the basic version was published. Recognizes the non-viability of publishing depth schedules in book form.
1960	<b>Sixth Edition</b>	Represents the pinnacle of Ranganathan's classification system. Widely adopted in Indian library schools. The CC is discussed at the International Study Conference.
1963	<b>Sixth Edition (Amended)</b>	The amended edition becomes the most popular and stable, used extensively in Indian library schools.
1987	<b>Seventh Edition</b> (Posthumous)	Published posthumously and edited by M.A. Gopinath. Considered by many to be inconsistent in structure and notation, with some parts discarded by the Indian library profession.

### *Three versions of Colon Classification*

Version	Year	Key Developments and Features
<b>Version 1</b>	<b>1933-50</b>	<b>Rigidly Faceted Era:</b> Facet formula was rigid and predetermined. The colon was the only connecting symbol for all facets. Dummy colons were used to represent absent facets. This made class numbers unwieldy and prone to misplacement.
<b>Version 2</b>	<b>1950-63</b>	<b>Analytico-Synthetic Era:</b> The fourth edition marked a milestone with the introduction of the five fundamental categories (PMEST). Each category had a distinct connecting symbol, simplifying and shortening the notation.
<b>Version 3</b>	<b>1963-87</b>	<b>Freely Faceted Era:</b> Focused on studying the properties and structure of the universe of subjects. Introduced sub-categories and flexibility in the system, allowing easy creation of new isolates and sector notation. This version was more adaptable and self-perpetuating, allowing for continuous addition of new subjects.

*Notation in Colon Classification (CC-7) Total-74 (60 semantic and 14 indicator)*

Notation	Count	Description
A/Z (Roman capitals)	26	Capital Roman letters used in notation.
Δ (Greek delta)	01	Greek letter delta used in notation.
0/9 Indo-Arabic numerals (decimal)	10	Indo-Arabic numerals used decimally.
a/z (Roman lowercase)	23	Lowercase Roman letters (excluding i, l, and o) used in notation.
* " ← Indicator symbols with anteriorising value	03	Symbols like asterisk, double quotation mark, and backward arrow with anteriorising value.
& ' . : ; , - = → + ( ) Ordinary indicator symbols	11	Common punctuation and symbols such as ampersand, quotation mark, colon, semicolon, comma, hyphen, equal sign, arrow, plus, and parentheses.

*Complex subjects and main classes in Colon Classification (CC):***Complex Subjects and Phase Relations**

A **complex subject** is a two-phased subject that depicts interdisciplinary relations. Six types of phase relations have been identified, with each having an indicator symbol and an example:

Type	Indicator Digits	Example	Class Number
<b>General</b>	a	Relation of political science with history	V&aW
<b>Bias</b>	b	Psychology for doctors	S&bL
<b>Comparison</b>	c	Physics compared with chemistry	C&cE
<b>Difference</b>	d	Difference between Christianity and Islam	Q,6&d7
<b>Tool</b>	e	Mathematical physics	C&eB
<b>Influencing</b>	g	Influence of Mahatma Gandhi on John Lennon	NR,56,NwN40&gzG

These phase relations can occur at three levels:

- **Interdisciplinary relation:** Between two main classes (e.g., chemistry and physics).
- **Intra-facet relation:** Between two foci of the same facet (e.g., Islam and Judaism).
- **Intra-array relation:** Between two isolates of the same array within a facet (e.g., Catholics and Protestants).

There are 18 possible relations (6 types x 3 levels). Phase relations supplement other relationships depicted in the classification system (e.g., PMEST, citation order, hierarchy, and helpful-sequence principles). The **ampersand (&)** symbol is used for phase relations, and each of the 18 relations has its own indicator symbol (a/y).

**Main Classes and Their Order**

Ranganathan's classification system emphasizes the structure and order of knowledge. He categorized knowledge based on its evolution into academic disciplines, with a focus on **systematic arrangement** and **helpful sequence**.

**Order of Disciplines in Colon Classification:**

1. **Science and Technology**
2. **Humanities**
3. **Social Sciences**

Each discipline is further subdivided into sub-disciplines, and the main classes within each discipline are arranged meticulously based on principles of knowledge development.

*Main Classes in Colon Classification:*

Main Class	Discipline
A/B	Science/Mathematics
C/D	Physics/Engineering
E/F	Chemistry/Chemical Technology
G/H	Biology/Geology
I/J	Botany/Agriculture
K/L	Zoology/Medicine
M	Useful Arts
Δ	Spiritual Experience & Mysticism
N/O/P	Fine Arts/Literature/Language
Q/R	Religion/Philosophy
S/T	Psychology/Education
U/V	Geography/History
W/X	Political Science/Economics
Y/Z	Sociology/Law

*Additionally, Generalia and Form classes precede these main classes:*

Generalia & Form Classes	Classes
A	Bibliography
K	General encyclopedias
M	General periodicals
P	Conference proceedings
W	Biographies
Z	Generalia classes
1	Universe of knowledge
2	Library science
3	Book science
4	Mass communication
8	Management science

*Structured overview of facet analysis,*

Facet	Description
<b>Facet Analysis</b>	Core concept of Ranganathan's CC philosophy. Complex subject class numbers are synthesized, not pre-made, based on the subject content and form of the document.
<b>Steps in Facet Analysis</b>	Eight steps to create a coextensive class number based on subject content and form. It starts with determining the specific subject, separating the subject from common isolates, and classifying it using PMEST categories.
<b>Determining Specific Subject</b>	Intuitive, trial-and-error process involving document details like title, subtitle, preface, and table of contents. Flair and experience are key.
<b>Postulated Classes</b>	Main and basic classes are pre-determined, and every subject belongs to one basic subject forming the first facet.
<b>Categories (PMEST)</b>	The categories are:
<b>[T] Time</b>	Represents chronological, diurnal, or seasonal aspects like century, period, or season.
<b>[S] Space</b>	Geographical, political areas, or population clusters (e.g., Asia, countries, cities, valleys).

<b>[E] Energy</b>	Refers to actions, activities, processes, or problems (e.g., treatment, diseases, teaching).
<b>[M] Matter</b>	Material of the entity, with three sub-categories:
	- Matter-Property [M-P]
	- Matter-Method [M-M]
	- Matter-Material [M-Mt]
<b>[P] Personality</b>	The most concrete but elusive category, referring to individuals, groups, institutions, and even abstract concepts like art styles, ideologies, laws. Identified through the Residual Method (after identifying the other categories).
<b>Round and Levels</b>	Categories may occur more than once in different rounds or levels. Each category has a specific round and may have multiple levels within it (e.g., [P] in literature as Language, Form, Author, Work).
<b>Facet Formula (PMEST)</b>	A logical citation order for categories, arranged by dependency principles. The general facet formula includes categories like [1P1], [1M1], [1E1], followed by space, time, etc. Categories repeat across rounds and levels.
<b>Wall-Picture Principle</b>	The master principle guiding the arrangement of categories: categories must depend on the primary facet, typically the main class or its amplification.
<b>Absolute Syntax</b>	The search for a natural order of facets that is independent of linguistic syntax, which may structure ideas universally. Ranganathan believed in a universal "absolute syntax" for arranging facets, but empirical evidence is lacking.
<b>Rounds and Levels</b>	Defines the hierarchy of categories and their recurrence within different facets. Categories like [P], [M], and [E] can occur in various rounds and levels. Time and Space only occur in the final round.

### *Synthesis process in Colon Classification*

Category	Details
<b>Synthesis</b>	Analysis is followed by synthesis in analytico-synthetic classification.
<b>Subject Facets</b>	Subject is separated from common isolates, which are added after the subject facets with their indicator symbols.
<b>Types of Common Isolates</b>	<b>Anteriorising Common Isolates (ACIs) and Posteriorising Common Isolates (PCIs).</b>

### *Anteriorising Common Isolates (ACIs)*

ACI	Description
<b>a</b>	Bibliography
<b>k</b>	Encyclopedia
<b>m</b>	Periodical
<b>r</b>	Administration Report
<b>s</b>	Statistics
<b>t</b>	Commission Report
<b>x</b>	Collected Works

### *Posteriorising Common Isolates (PCIs)*

PCI	Description	Indicator Symbol
<b>b14</b>	Calculation	, (comma)
<b>aTc</b>	Critical Study	; (semicolon)
<b>t</b>	Educational/Research Institutions	: (colon)

### *Examples of Class Numbers*

Class Number	Description
2;5'P''a	Bibliography of twenty-first century library classification
2;5''k1,P1	ISKO Encyclopedia of Knowledge Organization (IEKO)
2;5.1,g,N9	International Society for Knowledge Organization (ISKO)
2.73,g,M7	American Library Association (ALA)
2.73,g,M7,1;3	Functions of the President of the ALA
2,J1*Z.73:aT	Assessment of U.S. Academic Libraries
E*Z:aR	Research in Chemical Sciences
Y;aa	Theories of Sociology

### Complex Examples

Class Number	Description
O,111,2J64,M+V''aN	20th-century bibliography on <i>Merchant of Venice</i> by Shakespeare
L-L-9Un4-9E,32;4:6	Homeopathy for treatment of heart diseases of old people living in high altitudes
T,18.1=CN48,g,9N''v	A history of the Association of Commonwealth Universities
V,73;1844X=M1'P17←N75	The US armament policy towards Pakistan from 1975 to 2017
V,44;181=(Q,7)	India's foreign policy towards Muslim countries
Y''a''m73,N	Sociological abstracts

### Shelf Arrangement and APUPA Pattern

Concept	Details
<b>Shelf Arrangement</b>	<ul style="list-style-type: none"> <li>- Follows <b>Principle of Inversion</b> (reverse order of PMEST on shelves).</li> <li>- Arranged from general to specific: [T] → [S] → [E] → [M] → [P].</li> <li>- Order: General treated generally → General treated specially → Special treated generally → Special treated specially.</li> </ul>
<b>Ordinal Value</b>	<ul style="list-style-type: none"> <li>- Ordinal values of semantic and indicator symbols determine order.</li> <li>- Ascending order: a/z, 0/9, A/Z.</li> </ul>
<b>APUPA Pattern</b>	<ul style="list-style-type: none"> <li>- Represents <b>Alien</b> → <b>Penumbral</b> → <b>Umbral</b> → <b>Penumbral</b> → <b>Alien</b>.</li> <li>- <b>Alien (A)</b>: Related but not the subject.</li> <li>- <b>Penumbral (P)</b>: Bibliographies, dictionaries, advances, critical studies.</li> <li>- <b>Umbral (U)</b>: Core subject documents.</li> </ul>
<b>APUPA Arrangement</b>	<ul style="list-style-type: none"> <li>- Logical, pedagogically useful, reduces noise in locating documents.</li> <li>- Ensures a seamless continuum across all classes.</li> </ul>
<b>Index</b>	<ul style="list-style-type: none"> <li>- 6th edition: Multiple subject indexes.</li> <li>- 7th edition: No attached indexes.</li> <li>- <b>CINDEX</b>: Machine-readable index in UNESCO's WINISIS (2002), awaiting print integration.</li> </ul>
<b>Book Numbers</b>	<ul style="list-style-type: none"> <li>- Chronological book number system inspired by W.S. Biscoe and Melvil Dewey.</li> <li>- Formula: [L][F][Y].[V]-[S]:[C]:[g].</li> <li>- Components: Language, Form, Year, Volume, Supplement, Copy, Commentary.</li> <li>- Example: 2017 French book of quotations → x122Q7.</li> </ul>
<b>Key Characteristics</b>	<ul style="list-style-type: none"> <li>- Systematic, brief, mnemonic.</li> <li>- Integral part of Colon Classification.</li> <li>- Helps organize books and associated materials (e.g., volumes, copies, supplements).</li> </ul>

## YEAR-WISE EVOLUTION OF UDC

### UDC Tables Overview

Period & Phase	Details
<b>1. Origins of UDC (1885–1907)</b>	
<i>1.1 Early Development (1885–1895)</i>	<ul style="list-style-type: none"> <li>- <b>1885</b>: Paul Otlet and Henri La Fontaine begin work on the Universal Bibliographic Repertory.</li> <li>- <b>1895</b>: Otlet contacts Melvil Dewey to translate DDC into French.</li> </ul>
<i>1.2 First Edition (1902–1907)</i>	<ul style="list-style-type: none"> <li>- First analytico-synthetic classification developed by Otlet and La Fontaine.</li> <li>- <b>1902–1907</b>: First edition published in French as <i>Manuel du Répertoire Bibliographique Universel</i>.</li> <li>- Included <b>33,000 subdivisions</b>.</li> </ul>
<b>2. Expansion and Refinement (1927–1951)</b>	
<i>2.1 Second Edition (1927–1933)</i>	<ul style="list-style-type: none"> <li>- Post-WWI revisions focused on science and technology.</li> <li>- Edited by <b>Frits Donker Duyvis</b> (Dutch Patent Office).</li> <li>- Published <b>1927–1933</b> with <b>70,000 subdivisions</b>.</li> <li>- Released as <i>Classification Décimale Universelle (CDU)</i>.</li> </ul>
<i>2.2 Third Edition (1934–1951)</i>	<ul style="list-style-type: none"> <li>- First <b>German edition</b> published.</li> <li>- Edited by <b>Carl Walther</b>.</li> <li>- Expanded to <b>140,000 subdivisions</b>.</li> </ul>
<b>3. Institutional Changes and Global Adoption (1931–1992)</b>	
<i>3.1 Organizational Evolution</i>	<ul style="list-style-type: none"> <li>- <b>1931</b>: <i>Institut International de Bibliographie (IIB)</i> renamed <i>Institut International de Documentation (IID)</i>.</li> <li>- <b>1937</b>: IID becomes <i>Fédération Internationale de Documentation (FID)</i>.</li> <li>- <b>1988</b>: FID renamed <i>International Federation for Information and Documentation</i>.</li> <li>- <b>2000</b>: FID dissolved; UDC continues under <i>UDC Consortium (UDCC)</i>.</li> </ul>
<i>3.2 Management and Maintenance</i>	<ul style="list-style-type: none"> <li>- <b>1949</b>: <i>Extensions and Corrections to the UDC</i> introduced (initially biannual, then annual).</li> <li>- <b>1985</b>: <i>UDC International Medium Edition</i> published as <b>BS 1000M:1985</b>.</li> <li>- <b>1991</b>: FID forms a Task Force for UDC System Development to restructure management.</li> </ul>
<i>3.3 Formation of UDC Consortium (1992–1993)</i>	<ul style="list-style-type: none"> <li>- <b>1992</b>: <i>UDC Consortium (UDCC)</i> formed with FID, BSI, and four other publishers.</li> <li>- <b>1 January 1992</b>: Ownership officially transferred to UDCC.</li> <li>- <b>1993</b>: <i>Master Reference File (MRF)</i> created with <b>60,000 entries</b> (later expanded to <b>220,000 entries</b>).</li> <li>- UDCC assumes responsibility for official maintenance and development.</li> </ul>

*Auxiliary Tables of UDC*

Symbol	Meaning	Table	Example
+	Coordination, Addition	Table 1a	004+005 (Computer Science + Management)
/	Consecutive Extension	Table 1a	61/69 (Technology from 61 to 69)
:	Simple Relation	Table 1b	94:32 (History related to Economics)
::	Order-fixing	Table 1b	81::39 (Language in relation to Ethnography)
[]	Subgrouping	Table 1b	5[541] (Chemistry within Science)
*	Non-UDC Notation	Table 1h	*621.39 (External classification notation)
A/Z	Direct Alphabetical Specification	Table 1h	A Shakespeare (Directly classifying Shakespeare)

*Common Auxiliary Numbers in UDC*

Symbol	Description	Table Name	Example
=...	Language	Table 1c	81=111 (English Language)
(0...)	Form	Table 1d	82(091) (Historical Aspects of Literature)
(1/9)	Place	Table 1e	94(410) (History of the UK)
(=...)	Ethnicity/Nationality	Table 1f	930.85(=112.2) (History of Germanic Peoples)
"..."	Time	Table 1g	94"1945" (History of the Year 1945)
-0...	General Characteristics	Table 1k	7-051 (Artists as a Profession)

*Main Tables of UDC*

UDC Number	Subject Area
0	Science, Knowledge, Computer Science, Information, Documentation, Librarianship
1	Philosophy, Psychology
2	Religion, Theology
3	Social Sciences
5	Mathematics, Natural Sciences
6	Applied Sciences, Medicine, Technology
7	Arts, Recreation, Entertainment, Sport
8	Language, Linguistics, Literature
9	Geography, Biography, History

*UDC Timeline in Table Format*

Year	Event
1885	Paul Otlet and Henri La Fontaine start work on the Universal Bibliographic Repertory.
1895	Otlet obtains permission from Melvil Dewey to translate the Dewey Decimal Classification (DDC) into French.
1902-1907	First edition of UDC, titled <i>Handbook to the Universal Bibliographic Repertory</i> , published in French.
1927-1933	Second edition released with major revisions and expansion to 70,000 subdivisions.
1931	Institute International de Bibliography (IIB) renamed as Institute International de Documentation (IID).

<b>1934-1951</b>	Third edition (first in German) published; subdivisions increase to 140,000.
<b>1937</b>	IID renamed as Federation Internationale de Documentation (FID).
<b>1949</b>	First authorized amendments issued in <i>Extensions and Corrections to the UDC</i> (biannual, later annual).
<b>1985</b>	<i>UDC International Medium Edition (BS 1000M: 1985)</i> published in two parts – Systematic Tables (1985) and Alphabetical Subject Index (1988).
<b>1988</b>	FID renamed as International Federation for Information and Documentation.
<b>1991</b>	Task Force for UDC System Development formed to discuss restructuring and future management.
<b>1992</b>	UDC Consortium (UDCC) established; takes over ownership of UDC on 1 January.
<b>1993</b>	Master Reference File (MRF) database with 60,000 entries completed.
<b>2000</b>	FID dissolved; UDCC continues as the primary authority managing UDC.
<b>Present</b>	<p>Last Release UDC MRF12 (December 2018)</p> <p>Next Release UDC MRF13 (planned release 2023)</p> <p><i>Currently UDC Editor-in-Chief: Dr Aida Slavic and UDC Editor: Dr Ana Vukadin</i></p> <p><i>The UDC Consortium (UDCC) is a self-funded, non-profit organization managing the development and distribution of the Universal Decimal Classification since 1992.</i></p>

### List of Desktop Publishing Software

Software	Developer(s)	Latest Stable Version	Year	License
<b>Affinity Publisher</b>	Serif Europe	2.3.0 (Nov 30, 2023)	2019	Proprietary
<b>Apache OpenOffice Writer</b>	Apache Software Foundation	4.1.15 (Dec 22, 2023)	2002	Apache License 2.0
<b>Canva</b>	Canva Pty Ltd	Rolling updates	2013	Proprietary SaaS
<b>Collabora Online</b>	Collabora	24.04.11.4 (Jan 16, 2025)	2016	MPL-2.0 and others
<b>CorelDRAW</b>	Corel	24.5 (Sep 18, 2023)	1989	Proprietary
<b>InDesign</b>	Adobe	CC 2024 (Oct 2024)	1999	Proprietary Trialware
<b>LibreOffice Draw</b>	The Document Foundation	25.2.0 (Feb 6, 2025)	2011	GPL v3
<b>LyX</b>	The LyX Team	2.4.3 (Jan 16, 2025)	1995	GPL v2
<b>Marq</b>	Draper	Rolling updates	2013	Proprietary SaaS
<b>Microsoft Publisher</b>	Microsoft Corporation	2021 (Oct 5, 2021)	1991	Proprietary Trialware
<b>Pages</b>	Apple Inc.	13.2 (Sep 21, 2023)	2005	Proprietary
<b>QuarkXPress</b>	Quark, Inc.	2024 20.0.0 (Nov 14, 2023)	1987	Proprietary
<b>Scribus</b>	The Scribus Team	1.6.1 (Jan 7, 2024)	2003	GPL
<b>The Print Shop</b>	Broderbund	23.1 (2009)	1984	Proprietary

### List of Office Suites

Name	Developer	Year	License	Cost
Ability Office	Ability Plus Software	1995	Proprietary	Commercial
Apache OpenOffice	Apache Software Foundation	2012	Apache-2.0	Free
Calligra Suite	KDE	2011	LGPL, GPL	Free
Collabora Online	Collabora	2019	MPL-2.0	Free
Feng Office	Feng Office	2007	AGPL-3.0-only	Free
GNU TeXmacs	Joris van der Hoeven	1996?	GPL-3.0-or-later	Free
Google Workspace	Google	2006	Proprietary	Commercial
Hancom Office	Hancom	1998	Proprietary	Commercial
iWork	Apple Inc.	2005	Proprietary	Free
LibreOffice	The Document Foundation	2010	MPL-2.0	Free
Microsoft 365	Microsoft	2015	Proprietary	Commercial
OfficeSuite	MobiSystems	2004	Proprietary	Commercial
OnlyOffice	Ascensio Systems	2010	AGPL	Commercial
Polaris Office	Infracore Inc.	2011	Proprietary	-
SoftMaker Office	SoftMaker	2012	Proprietary	Commercial
Tiki Wiki CMS Groupware	Tiki Association	2002	LGPL-2.1-only	Free
WordPerfect Office	Corel	1991	Proprietary	Commercial
WPS Office	Kingsoft	1988	Proprietary	Commercial
Zimbra	Synacor	2005	Proprietary	Commercial
Zoho Workplace	Zoho Corp.	2005	Proprietary	Commercial

### List Of Word Processor Programs

Name	Developer	Year	License	Cost
Apache OpenOffice Writer	Apache Software Foundation	2012	Apache-2.0	No cost
AppleWorks	Apple Inc.	1991	Proprietary	Cost
Applix Word	Vistasource Inc.	1992	Proprietary	Cost
Collabora Online Writer	Collabora	2019	MPL-2.0	No cost
CopyDesk	Quark, Inc.	1991	Proprietary	Cost
EZ Word	Andrew Project	1985	MIT-CMU	No cost
FrameMaker	Adobe Systems Incorporated	1986	Proprietary	Cost
Gobe Productive	Gobe Software	1998	Proprietary	Cost
Google Docs	Google	2006	Proprietary	No cost
Hangul	Haansoft	1989	Proprietary	Cost
InCopy	Adobe Systems Incorporated	1999	Proprietary	Cost
KOffice KWord	Reginald Stadlbauer, KDE	1998	GPL, LGPL	No cost
LibreOffice Writer	The Document Foundation	2011	MPL-2.0	No cost

Lotus Symphony	Lotus Software	2008	Proprietary	No cost
Lotus Word Pro	Lotus Software	1989	Proprietary	Cost
LyX	The LyX Project	1995	GPL-2.0-or-later	No cost
Mariner Write	Mariner Software	1996	Proprietary	Cost
Microsoft Word	Microsoft Corporation	1983	Proprietary	Cost
Microsoft Works	Microsoft Corporation	1987	Proprietary	Cost
NeoOffice Writer	Planamesa Software	2003	GPL	No cost
OpenOffice.org Writer	Sun Microsystems, Oracle Corporation	2002	Apache-2.0	No cost
Pages	Apple Inc.	2005	Proprietary	Cost
TextEdit	Apple Inc.	1993	BSD-3-Clause	No cost
TextMaker	SoftMaker	2012	Proprietary	Cost
WPS Office	Kingsoft	2012	Proprietary	Cost
WordPad	Microsoft Corporation	1995	Proprietary	No cost

### List of text editors

Name	Developer	Year	Cost	License
Acme	Rob Pike	1993	No cost	MIT, GPL-2.0-only, LPL-1.02
Atom	GitHub	2014	No cost	MIT
Bluefish	Bluefish Development Team	1999	No cost	GPL-3.0-or-later
Brackets	Adobe Systems	2012	No cost	MIT
Coda	Panic	2007	Commercial	Proprietary
ConTEXT	ConTEXT Project Ltd	1999	No cost	BSD-3-Clause
CudaText	UVViewSoft	2015	No cost	MPL-2.0
GNU Emacs	Richard Stallman	1984	No cost	GPL-3.0-or-later
Notepad++	Don Ho	2003	No cost	GPL-3.0-or-later
SciTE	Neil Hodgson	1999	Commercial	HPND
Sublime Text	Jon Skinner, Sublime HQ	2008	Commercial	Shareware
Visual Studio Code	Microsoft	2015	No cost	MIT

### Essential TCP/IP Ports Cheat Sheet

*Each port serves a specific function in communication, data transfer, or remote access. Below is a breakdown of the most used ports and their real-world applications.*

Protocol with RFC Code	TCP/UDP	Port No.	Description
<b>File Transfer Protocol (FTP)</b> (RFC 959)	TCP	20/21	Used for file transfers; control on port 21, data on port 20.
<b>Secure Shell (SSH)</b> (RFC 4250-4256)	TCP	22	Secure remote command-line access to network devices.
<b>Telnet</b> (RFC 854)	TCP	23	Unsecured remote command-line access.
<b>Simple Mail Transfer Protocol (SMTP)</b> (RFC 5321)	TCP	25	Used to send emails between servers and from clients.

<b>Domain Name System (DNS)</b> (RFC 1034-1035)	TCP/UDP	53	Translates domain names to IP addresses.
<b>Dynamic Host Configuration Protocol (DHCP)</b> (RFC 2131)	UDP	67/68	Assigns IP addresses dynamically in a network.
<b>Trivial File Transfer Protocol (TFTP)</b> (RFC 1350)	UDP	69	Simplified file transfer without session establishment.
<b>Hypertext Transfer Protocol (HTTP)</b> (RFC 2616)	TCP	80	Used by web browsers to access web pages.
<b>Post Office Protocol (POP3)</b> (RFC 1939)	TCP	110	Retrieves emails from a server, usually deleting them after.
<b>Network Time Protocol (NTP)</b> (RFC 5905)	UDP	123	Synchronizes system clocks over the Internet.
<b>NetBIOS over TCP/IP (NBT)</b> (RFC 1001-1002)	TCP/UDP	137/138/139	Used for Windows network communication.
<b>Internet Message Access Protocol (IMAP)</b> (RFC 3501)	TCP	143	Retrieves emails while keeping them on the server.
<b>Simple Network Management Protocol (SNMP)</b> (RFC 1901-1908, 3411-3418)	TCP/UDP	161/162	Monitors and manages network devices.
<b>Border Gateway Protocol (BGP)</b> (RFC 4271)	TCP	179	Manages large-scale routing on the Internet.
<b>Lightweight Directory Access Protocol (LDAP)</b> (RFC 4510)	TCP/UDP	389	Accesses and maintains directory information.
<b>Hypertext Transfer Protocol Secure (HTTPS)</b> (RFC 2818)	TCP	443	Secure version of HTTP using SSL/TLS.
<b>Lightweight Directory Access Protocol Secure (LDAPS)</b> (RFC 4513)	TCP/UDP	636	Secure version of LDAP using SSL/TLS.
<b>FTP over TLS/SSL</b> (RFC 4217)	TCP	989/990	Secure version of FTP using SSL/TLS.

### Overview of IANA

Category	Details
<b>Full Form</b>	Internet Assigned Numbers Authority (IANA)
<b>Founded</b>	December 1988
<b>Founder</b>	U.S. Department of Commerce
<b>Headquarters</b>	Los Angeles, USA
<b>Owner</b>	ICANN (Internet Corporation for Assigned Names and Numbers)
<b>Key Person</b>	Kim Davies (Current Manager) as on 22 Feb 2025

### Functions of IANA

Function	Description
<b>IP Address Allocation</b>	Assigns IP blocks (IPv4 & IPv6) to Regional Internet Registries (RIRs).
<b>Autonomous System Numbers (ASN)</b>	Allocates numbers for BGP (Border Gateway Protocol) to manage internet routing.
<b>DNS Root Zone Management</b>	Maintains domain extensions like .com, .org, .gov, etc.
<b>Protocol Assignments</b>	Manage port numbers, media types, and other internet identifiers.
<b>DNSSEC Key Management</b>	Secures DNS root zone with cryptographic keys.

### History & Administration

Year	Event
<b>1972</b>	Vint Cerf & Jon Postel at UCLA proposed a socket number catalog (RFC 322).
<b>1988</b>	The term "IANA" first appeared in RFC 1083.
<b>1995</b>	The National Science Foundation allowed Network Solutions to charge a fee for domain names.
<b>1998</b>	ICANN took over IANA operations.
<b>2014</b>	U.S. announced transition of IANA functions to a global community.
<b>2016</b>	IANA stewardship officially transferred from the U.S. government to the private sector.

### Global Internet Governance

Organization	Region Managed
<b>ARIN</b>	North America
<b>RIPE NCC</b>	Europe, Middle East, Central Asia
<b>APNIC</b>	Asia-Pacific
<b>LACNIC</b>	Latin America & Caribbean
<b>AFRINIC</b>	Africa

### Publication Identifiers and Their Governing Organizations

Identifier	Developer(s)	Organization	Introduced	Structure	Example
<b>ISBN</b> International Standard Book Number	Gordon Foster	International ISBN Agency	1970	13 digits (978/979 prefix) or 10 digits (before 2007)	ISBN 978-1533573940
<b>ISSN</b> International Standard Serial Number	ISO	ISSN International Centre	1975	8-digit code (XXXX-XXXX)	ISSN 1476-4687
<b>DOI</b> Digital Object Identifier	International DOI Foundation	International DOI Foundation	October 1997	Prefix (10.xxxx) + unique suffix	10.1000/182
<b>SICI</b> Serial Item and Contribution Identifier	National Information Standards Organization (NISO)	National Information Standards Organization (NISO)	1996	ISSN + publication date + volume + issue + article code	Varies

<b>BICI</b> Book Item and Component Identifier	National Information Standards Organization (NISO)	National Information Standards Organization (NISO)	1997	ISBN + section details	Similar to SICI but for books
<b>PII</b> Publisher Item Identifier	Various publishers	Various Publishers	1996	17-character alphanumeric string	S0362152900011995
<b>ISTC</b> International Standard Text Code	International ISTC Agency	International ISTC Agency	2009	16-character alphanumeric code	ISTC 0A9-2002-12B4A105-7
<b>SBN</b> Standard Book Number	UK Publishers Association	UK Publishers Association (Historical)	1966	9-digit code (converted to ISBN)	0-330-28498-3
<b>ASIN</b> Amazon Standard Identification Number	Amazon	Amazon	1996	10-character alphanumeric code	B01DUV1T00
<b>ISMN</b> International Standard Music Number	International ISMN Agency	UK Branch of IAML put Forwarded by Alan Pope ,Malcolm Lewis and Malcolm Jones	1993	13 digits (979-0 prefix)	ISMN 979-0-060-11561-5
<b>ISRC</b> International Standard Recording Code	International Federation of the Phonographic Industry (IFPI)	International Federation of the Phonographic Industry (IFPI)	1986	12-character alphanumeric code	ISRC US-S1Z-99-00001
<b>ISWC</b> International Standard Musical Work Code	CISAC (International Confederation of Societies of Authors and Composers)	CISAC	1995	'T' prefix + 9 digits + check digit	ISWC T-034.524.680-1
<b>CODEN</b> Unique Identifier for Scientific Publications	Charles Bishop (Chronic Disease Research Institute)	International CODEN Service (Chemical Abstracts Service)	1953	6-character alphanumeric code	JACSAT (for <i>Journal of the American Chemical Society</i> )
<b>PMID</b> PubMed Identifier	National Library of Medicine (NLM)	National Library of Medicine (NLM)	1997	Unique numeric identifier	PMID: 31452104

<b>PMCID</b> PubMed Central Identifier	National Institutes of Health (NIH)	National Institutes of Health (NIH)	2000	PMCID prefix + unique number	PMCID: PMC6789102
<b>Zbl</b> (Zentralblatt)	Zentralblatt MATH (zbMATH) identifier.				
<b>Pii</b> (Publisher Item Identifier)		The PII specification is no longer in common use (2010).			

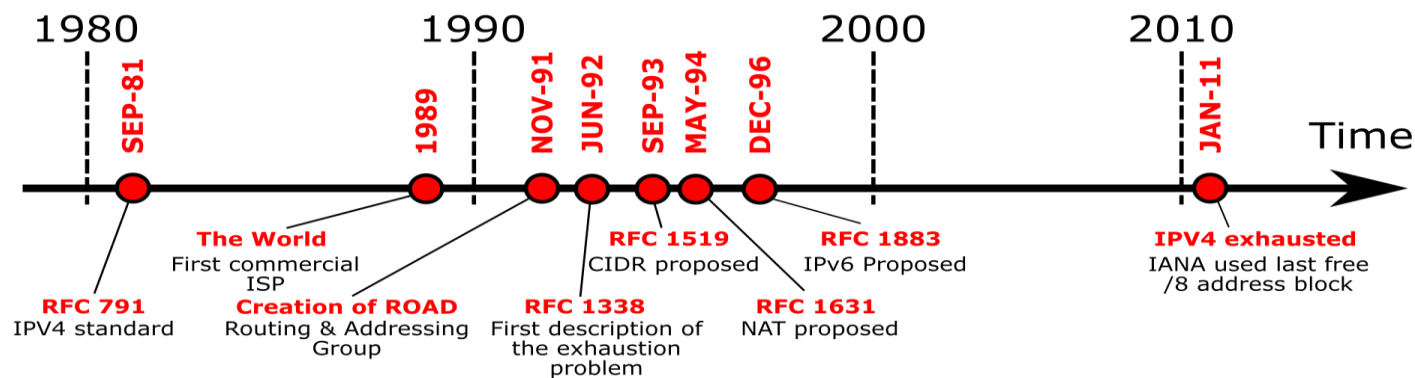
### Internet Protocol Suite - Layered Structure

Layer	Protocols
<b>Application Layer</b>	BGP, DHCP (v6), DNS, FTP, HTTP (HTTP/3), HTTPS, IMAP, IRC, LDAP, MGCP, MQTT, NNTP, NTP, OSPF, POP, PTP, ONC/RPC, RTP, RTSP, RIP, SIP, SMTP, SNMP, SSH, Telnet, TLS/SSL, XMPP, CoAP, TFTP, WebSocket, Gopher, Finger, RTMP, WHOIS, SFTP, SCP, Syslog, BitTorrent, mDNS, SDP, ICE, WebRTC, Diameter, RADIUS, S/MIME, X.400, X.500, SMB, NFS, ACAP, NNTP, LPR, iSCSI
<b>Transport Layer</b>	TCP, UDP, DCCP, SCTP, RSVP, QUIC, RUDP, MPTCP, LTP, ATP
<b>Internet Layer</b>	IPv4, IPv6, ICMP (v6), ND, PEEN, IGMP, IPsec, GRE, Mobile IP, MPLS, LISP
<b>Link Layer</b>	ARP, Tunnels, PPP, MAC, SLIP, RARP, L2TP, STP, VTP, VLAN, HDLC, Frame Relay, ATM, FDDI, IS-IS, LLDP, CDP

### IPv4 Key Information

IPv4 uses 32-bit addresses which limits the address space to 4294967296 (2<sup>32</sup>) addresses. IPv4 reserves special address blocks for private networks ( $2^{24} + 2^{20} + 2^{16} \approx 18$  million addresses) and multicast addresses ( $2^{28} \approx 268$  million addresses).

Attribute	Details
<b>Full Name</b>	Internet Protocol Version 4 (IPv4)
<b>Abbreviation</b>	IPv4
<b>Purpose</b>	Internetworking Protocol
<b>Developer(s)</b>	DARPA
<b>Introduced</b>	1981 (44 years ago)
<b>Influenced</b>	IPv6
<b>OSI Layer</b>	Network Layer
<b>RFC(s)</b>	791



### Special IPv4 Address Ranges

Type	CIDR Block	Address Range	Use Case
Local Network	0.0.0.0/8	0.0.0.0 – 0.255.255.255	Refers to the local network
Loopback	127.0.0.0/8	127.0.0.0 – 127.255.255.255	Localhost communication/testing
Private A	10.0.0.0/8	10.0.0.0 – 10.255.255.255	Large private networks
Private B	172.16.0.0/12	172.16.0.0 – 172.31.255.255	Medium private networks
Private C	192.168.0.0/16	192.168.0.0 – 192.168.255.255	Home & small business networks
Link-Local	169.254.0.0/16	169.254.0.0 – 169.254.255.255	Auto-assigned IPs (No DHCP)
Multicast	224.0.0.0/4	224.0.0.0 – 239.255.255.255	Used for multicast traffic
Reserved	240.0.0.0/4	240.0.0.0 – 255.255.255.254	Reserved for future use
Broadcast	255.255.255.255	255.255.255.255	Limited broadcast address

## IPv6 Key Information

### Summary

IPv6, developed by the **IETF**, was designed to replace IPv4 and solve address exhaustion while improving **security, efficiency, and scalability**. It introduces a **fixed 40-byte header**, eliminates NAT, and provides enhanced addressing and routing capabilities. However, IPv4 and IPv6 are **not directly interoperable**, requiring transition mechanisms.

Attribute	Details
Full Name	Internet Protocol Version 6 (IPv6)
Abbreviation	IPv6
Purpose	Internetworking Protocol
Developer(s)	Internet Engineering Task Force (IETF)
Introduced	December 1995 (29 years ago)
Based on	IPv4
OSI Layer	Network Layer
RFC(s)	2460, 8200

### IPv6 Packet Structure

Component	Details
Packet Parts	Header + Payload
Payload Size	Max 64 KB, up to 4 GB with Jumbo Payload option

<b>Extension Headers</b>	Used for routing, fragmentation, security (IPsec), and more
--------------------------	-------------------------------------------------------------

**IPv6 Addressing**

Feature	Details
<b>Address Length</b>	128 bits
<b>Structure</b>	<b>64-bit Routing Prefix + 64-bit Interface Identifier</b>
<b>Loopback Address</b>	::1 (equivalent to 127.0.0.1 in IPv4)
<b>Unicast Address Types</b>	Global, Link-Local (FE80::/10), Unique Local (FC00::/7)
<b>Multicast</b>	FF00::/8

**IPv6 Address Representation & Shortening**

- **Standard Format:** 2001:0db8:0000:0000:0000:ff00:0042:8329
- **Leading Zero Removal:** 2001:db8:0:0:0:ff00:42:8329
- **Zero Compression (::):** 2001:db8::ff00:42:8329
- **Loopback Address:** ::1
- **In URLs (due to colons in IPv6):** Use **square brackets** → [2001:db8::1]:8080

**IPv6 vs. IPv4 Comparison**

Feature	IPv4	IPv6
<b>Address Size</b>	32-bit (4.3 billion IPs)	128-bit (340 undecillion IPs)
<b>Header Size</b>	Larger, complex	Smaller, optimized
<b>Addressing</b>	Manual/DHCP required	Auto-configuration supported
<b>Security</b>	Optional (IPsec)	Mandatory (IPsec built-in)
<b>NAT Required?</b>	Yes	No
<b>Fragmentation</b>	Routers can fragment	Hosts must handle it (Path MTU Discovery)

**INFLIBNET Centre: Overview and Programs**

Category	Programme / Initiative	Description
<b>Library Automation</b>	<b>IndCat</b>	Union Catalogue of Indian Universities. Gathers bibliographic records from universities with/without MoUs.
	<b>SOUL 3.0</b>	Integrated library management software. Complies with MARC 21, Unicode, NCIP 2.0, SIP 2.
	<b>Online Copy-Catalogue System</b>	Promotes cooperative cataloguing using IndCat. Allows copy, modify, and new entry of book data.
<b>e-Consortium</b>	<b>e-ShodhSindhu</b>	Provides access to 10,000+ journals, 1.64+ lakh eBooks, 4 databases, and 6 lakh NDL eBooks to academic institutions.
	<b>N-LIST</b>	Access to 6,000+ journals and 1.64+ lakh eBooks to colleges. Now part of e-ShodhSindhu.
	<b>InfiStats</b>	Software for monitoring COUNTER-compliant e-resource usage statistics by member institutions.
	<b>INFED</b>	INFLIBNET Access Federation using Shibboleth for seamless authentication to e-resources.

	<b>ShodhShuddhi</b>	<b>September 1, 2019</b> – The <b>Ministry of Education, Government of India</b> launched the <b>ShodhShuddhi</b> programme. National plagiarism detection project for all Indian universities and institutions.
<b>Open Access Initiatives</b>	<b>Shodhganga</b>	<b>2011</b> – <b>Shodhganga</b> was officially launched as a national digital repository for <b>Indian theses and dissertations</b> . Digital repository of Indian theses and dissertations as per UGC guidelines. Built using DSpace.
	<b>ShodhGangotri</b>	Repository of research synopses, MRPs, PDFs, PG dissertations—mapped to Shodhganga.
	<b>Shodh-Chakra</b>	<b>May 10, 2022</b> – <b>Shodh Chakra</b> was launched virtually by <b>UGC Chairman Prof. Mamidala Jagadesh Kumar</b> in collaboration with the <b>INFLIBNET Centre</b> .
	<b>IR@INFLIBNET</b>	Institutional repository using DSpace for CALIBER, PLANNER papers, course material, etc.
	<b>INFOPORT</b>	<b>March 1, 2012</b> – <b>InfoPort</b> was officially launched by <b>Prof. Mahendra P. Lama</b> , Vice Chancellor of Sikkim University, during the <b>8th PLANNER 2012</b> conference.
<b>Scholarly Network</b>	<b>Vidwan</b>	<b>Important Dates and Years: VIDWAN – Expert Database</b> <ul style="list-style-type: none"> <li>• <b>1999</b> – Launch of the <b>University Expert Database</b>, containing profiles of subject experts in Indian universities and academic institutions.</li> <li>• <b>2001</b> – Development of the <b>Expert Database in Science and Technology</b> by INFLIBNET with support from NISSAT, DSIR, focusing on experts in R&amp;D organizations.</li> <li>• <b>2012</b> – <b>Merger</b> of the two databases and launch of <b>VIDWAN: Expert Database</b>, incorporating modern technological features and a unified platform.</li> </ul>
	<b>IRINS</b>	<b>Important Dates and Years: IRINS – Indian Research Information Network System</b> <ul style="list-style-type: none"> <li>• <b>2017</b> – <b>IRINS</b> was conceptualized to create a Research Information Management (RIM) system for academic institutions in India.</li> <li>• <b>September 2018</b> – First instance of <b>IRINS</b> implemented at <b>Pondicherry University</b>.</li> <li>• <b>October 2018</b> – <b>VIDWAN integrated</b> with <b>IRINS</b> for expert profiling and academic identity.</li> <li>• <b>2018 onwards</b> – Implementation at major institutions like <b>IISc, IIT Madras, IIT Delhi, Central Universities (CUTN, CUP, PU)</b>, and R&amp;D organizations such as <b>NAL, NIIST</b>.</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Project Approved by MHRD</b> – For the deployment of IRINS across <b>150+ Centrally Funded Academic Institutions</b>.</li> <li>• <b>2002–Present</b> – Continuous development of <b>VIDWAN</b>, which powers IRINS expert profiling.</li> </ul>
	<b>SheRNI</b>	<b>March 11, 2024</b> – SheRNI was launched by the UGC's <b>INFLIBNET Centre</b> as an <b>expert profile network</b> aimed at <b>connecting and empowering women</b> scientists and faculty members across India.
<b>E-Content Development</b>	<b>ILMS</b>	INFLIBNET Learning Management Service for HEIs. Uses content from e-PG Pathshala aligned with UGC.

### TURNITIN

Category	Details
<b>Name</b>	Turnitin
<b>Company</b>	Turnitin, LLC (Subsidiary of Advance Publications)
<b>Founded</b>	1998
<b>Purpose</b>	Plagiarism detection and originality checking
<b>Primary Users</b>	Students, Teachers, Librarians, Academic Institutions
<b>Access Mode</b>	Software as a Service (SaaS)
<b>Main Features</b>	<ul style="list-style-type: none"> <li>- Similarity Checking</li> <li>- Originality Report</li> <li>- GradeMark (Online Grading)</li> <li>- PeerMark (Peer Review)</li> </ul>
<b>Relevant Tools</b>	<ul style="list-style-type: none"> <li>- Turnitin.com</li> <li>- Plagiarism.org</li> <li>- iThenticate</li> </ul>
<b>Integration in LMS</b>	- Integrates with Moodle, Blackboard, Instructure, Desire2Learn, Sakai, etc.
<b>Acquisitions</b>	- Ouriginal (2021), merged from Urkund and PlagScan

## UGC 2018 – Penalties for Plagiarism

**Act Name: UNIVERSITY GRANTS COMMISSION NOTIFICATION UNIVERSITY GRANTS COMMISSION (PROMOTION OF ACADEMIC INTEGRITY AND PREVENTION OF PLAGIARISM IN HIGHER EDUCATIONAL INSTITUTIONS) REGULATIONS, 2018 New Delhi, the 23rd of July, 2018**

### Penalties – Thesis/Dissertation (Students)

Level	Similarity Range	Penalty
Level 0	$\leq 10\%$	Minor similarity – <i>No penalty</i>
Level 1	$>10\%$ to $40\%$	Resubmit revised script within <i>6 months</i>
Level 2	$>40\%$ to $60\%$	Debarred from resubmitting for <i>1 year</i>
Level 3	$>60\%$	<i>Registration cancelled</i> for the programme

### Penalties – Academic & Research Publications (Faculty/Researchers)

Level	Similarity Range	Penalty
Level 0	$\leq 10\%$	Minor similarity – <i>No penalty</i>
Level 1	$>10\%$ to $40\%$	<i>Withdraw manuscript</i>
Level 2	$>40\%$ to $60\%$	<i>Withdraw manuscript</i> , Denied <i>1 annual increment</i> , Cannot supervise for <i>2 years</i>
Level 3	$>60\%$	<i>Withdraw manuscript</i> , Denied <i>2 increments</i> , Cannot supervise for <i>3 years</i>

### UGC 2018 – Similarity Checks: What is Excluded?

Sl. No.	Excluded from Similarity Checks
i.	Quoted work with proper <b>permission</b> and/or <b>attribution</b>
ii.	<b>References, Bibliography, Table of Contents, Preface, Acknowledgements</b>
iii.	<b>Generic terms, laws, standard symbols, and standard equations</b>

### Note: Original Work Requirement

- Research work must be based on **original ideas** (including abstract, summary, hypothesis, observations, results, conclusions, and recommendations).
- Common knowledge or coincidental terms** of up to **14 consecutive words** are excluded from similarity detection.

## IFLA

Attribute	Details
Full Name	International Federation of Library Associations and Institutions (IFLA)
Type	International, Non-Governmental, Not-for-Profit Organization
Founded	30 September 1927
Place of Foundation	Edinburgh, Scotland
Headquarters	National Library of the Netherlands (Koninklijke Bibliotheek), The Hague
First President	Isak Collijn (National Library of Sweden)
First Constitution	Approved in 1929, Rome
First World Congress	World Congress of Librarianship and Bibliography (1929)

Annual Event	IFLA World Library and Information Congress (WLIC)
2021 Milestone	First online WLIC due to global pandemic
Partnerships	UNESCO (joint manifestos), Blue Shield (cultural heritage protection)

### List of IFLA Secretaries General

Name	Tenure
Sharon Memis	2023–present As on 4 April 2025
Helen Mandl (Acting)	2021–2023
Gerald Leitner	2016–2021
Jennefer Nicholson	2008–2016
Peter Lor	2005–2008
Rasu Ramachandran	2004–2005
Ross Shimmon	1999–2004
Leo Voogt	1992–1998
Paul Nauta	1987–1992
Margreet Wijnstroom	1971–1987
Anthony Thompson	1962–1970
Maria Razumovsky (Interim)	1962
Joachim Wieder	1958–1962
Tietse Pieter Sevensma	1929–1958
Heinrich Uhlendahl	1928–1929

### IFLA Divisions

Division	Focus Areas	Sections and Special Interest Groups
<b>Division I: Library Types</b>	Types of libraries	<ul style="list-style-type: none"> <li>- Academic, research, public, special, and school libraries</li> <li>- <b>Strategic Programme:</b> Committee on Standards</li> <li>- <b>Special Interest Groups:</b> Evidence for Global and Disaster Health (E4GDH)</li> </ul>
<b>Division II: Library Collections</b>	Collections and content	<ul style="list-style-type: none"> <li>- Acquisitions and collection development</li> <li>- Rare books and special collections</li> <li>- News media</li> <li>- <b>Strategic Programmes:</b> Preservation and Conservation (PAC), Committee on Standards</li> <li>- <b>Special Interest Groups:</b> LGBTQ users, Library Publishing</li> </ul>
<b>Division III: Library Services</b>	Library practices and services	<ul style="list-style-type: none"> <li>- Bibliography</li> <li>- Cataloguing</li> <li>- Indigenous Matters</li> <li>- <b>Strategic Programmes:</b> UNIMARC, Committee on Standards</li> </ul>

		- <b>Special Interest Groups:</b> Big Data, Digital Humanities
<b>Division IV: Support of the Profession</b>	Professional infrastructure	<ul style="list-style-type: none"> <li>- Library buildings and equipment</li> <li>- Theory and research</li> <li>- Statistics and evaluation</li> <li>- <b>Strategic Programmes:</b> FAIFE, CLM, Committee on Standards</li> <li>- <b>Special Interest Groups:</b> Women, Information and Libraries; LIS Education in Developing Countries</li> </ul>
<b>Division V: Regions</b>	Regional representation	<ul style="list-style-type: none"> <li>- Africa</li> <li>- Asia and Oceania</li> <li>- Latin America and the Caribbean</li> <li>- <b>Strategic Programmes:</b> Library Development Programme (LDP), Committee on Standards</li> <li>- <b>Special Interest Group:</b> Access to Information Network – Africa (ATINA)</li> </ul>

### IFLA Strategic Programs

Programme Name	Focus
<b>Committee on Standards</b>	Develops and maintains IFLA's professional standards
<b>Copyright and other Legal Matters (CLM) Advisory Committee</b>	Legal advocacy, especially in copyright and intellectual property
<b>Freedom of Access to Information and Freedom of Expression (FAIFE) Advisory Committee</b>	Promotes access and expression freedoms globally
<b>Library Development Programme (LDP)</b>	Capacity building and support for library development
<b>Preservation and Conservation (PAC) Programme</b>	Safeguarding physical and digital heritage
<b>UNIMARC Strategic Programme</b>	Maintenance and promotion of the UNIMARC bibliographic format

### IFLA Manifestos

Manifesto Title	Year	Collaborators / Notes
<b>IFLA/UNESCO Public Library Manifesto</b>	1994	Jointly with UNESCO
<b>IFLA/UNESCO School Library Manifesto</b>	1999	Jointly with UNESCO
<b>Alexandria Manifesto on Libraries, the Information Society in Action</b>	2005	Issued at World Summit on the Information Society
<b>IFLA Manifesto on Transparency, Good Governance and Freedom from Corruption</b>	2008	IFLA-led
<b>IFLA/UNESCO Multicultural Library Manifesto</b>	2009	Jointly with UNESCO

<b>IFLA Library Statistics Manifesto</b>	2010	Focus on data and performance measurement
<b>IFLA/UNESCO Manifesto for Digital Libraries</b>	2010	Jointly with UNESCO
<b>IFLA Manifesto for Libraries Serving Persons with a Print Disability</b>	2012	Advocates accessibility for print-disabled users
<b>Internet Manifesto 2014</b>	2014	Update to previous Internet principles
<b>A Library Manifesto for Europe</b>	2019	Focused on policy and funding in the European region
<b>IFLA School Library Manifesto</b> ( <i>forthcoming</i> )	2021	Updated version of 1999 School Library Manifesto
<b>IFLA-UNESCO Public Library Manifesto</b>	2022	Latest update to the 1994 Manifesto
<b>IFLA Internet Manifesto</b>	2024	Most recent Internet access and information freedom principles

### IFLA Presidents

<b>Name</b>	<b>Country</b>	<b>Tenure</b>
Isak Collijn	Sweden	1927–1931
William Warner Bishop	United States	1931–1936
Marcel Godet	Switzerland	1936–1947
Wilhelm Munthe	Norway	1947–1951
Pierre Bourgeois	Switzerland	1951–1958
Gustav Hofmann	West Germany	1958–1963
Sir Frank Francis	United Kingdom	1963–1969
Herman Liebaers	Belgium	1969–1974
Preben Kirkegaard	Denmark	1974–1979
Else Granheim	Norway	1979–1985
Hans-Peter Geh	West Germany	1985–1991
Robert Wedgeworth	United States	1991–1997
Christine Deschamps	France	1997–2003
Kay Raseroka	Botswana	2003–2005
Alex Byrne	Australia	2005–2007
Claudia Lux	Germany	2007–2009
Ellen Tise	South Africa	2009–2011
Ingrid Parent	Canada	2011–2013
Sinikka Sipilä	Finland	2013–2015
Donna Scheeder	United States	2015–2017
Gloria Pérez-Salmerón	Spain	2017–2019
Christine Mackenzie	Australia	2019–2021
Barbara Lison	Germany	2021–2023
<b>Vicki McDonald</b> ( <i>Current President</i> )	Australia	<b>2023–2025</b>

## OCLC, Inc.

Field	Details
Full Name	OCLC, Inc. <i>(formerly Ohio College Library Center)</i>
Founded	July 5, 1967 (57 years ago)
Founder	Fred Kilgour
Organization Type	501(c)(3) Non-Profit Organization
Headquarters	Dublin, Ohio, United States
Region of Operation	Worldwide
Current President & CEO	Skip Prichard

### Key Products & Services of OCLC

Product / Service	Description
WorldCat	Global catalog of library collections
Amlib	Library management software
BIBLIOTHECAplus	Integrated library system
Capira	Mobile apps and solutions for libraries
CatExpress	Copy cataloging service
CONTENTdm	Digital collection management
Dewey Decimal Classification	Widely used library classification system
EZproxy	Remote access authentication service
FirstSearch	Online reference and discovery tool
LBS	Library automation system
OLIB	Web-based integrated library system
PiCarta	Dutch union catalog
Relais ILL & D2D	Interlibrary loan and document delivery
SISIS-SunRise	Library software for German-speaking users
Syndeo	Service hub platform
Tipasa	Cloud-based interlibrary loan management
TouchPoint	Discovery and library services interface
UnityUK	UK-based interlibrary loan service
VDX	Virtual Document eXchange for ILL
WebJunction	Online training and resources for libraries
Wise	Community engagement and library management system
WorldShare	Cloud-based library services platform

### OCLC, Inc. – Presidents

Name	Tenure
Frederick G. Kilgour	1967–1980
Rowland C. W. Brown	1980–1989
K. Wayne Smith	1989–1998
Jay Jordan	1998–2013

Skip Prichard	2013–present
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### *OCLC – Company Acquisitions*

Year	Company/Service Acquired	Details
2002	NetLibrary	Provider of electronic books and textbooks; sold to EBSCO in 2010.
2006	Research Libraries Group (RLG)	Merged with OCLC in July 2006.
2007	OCLC PICA	Dutch library automation company; OCLC already owned 100%, and rebranded it as “OCLC” in late 2007.
2008	EZproxy	Acquired on January 11, 2008; software enables remote access to library databases.
2009	OAIster	Massive union catalog of open access digital resources; fully integrated into WorldCat in October 2009.
2013	HKA and Wise	Dutch automation company and its product Wise; a "community engagement system" with CRM, marketing, and ILS functions.
2015	Sustainable Collection Services (SCS)	Consultancy for analyzing and managing print collections in libraries.
2017	Relais International	Canadian interlibrary loan and resource sharing solutions provider.







### **Special Project: REALM**

During the **COVID-19 pandemic**, OCLC participated in the **REALM (REopening Archives, Libraries, and Museums)** project, funded by the IMLS. The project examined **surface transmission risks** of SARS-CoV-2 on common materials in libraries and museums, resulting in **scientific reports and safety guidelines**.


### *Creative Commons License (CCL) – History*

Event	Year	Details
<b>Creation of CCL</b>	<b>2001</b>	Designed by <b>Lawrence Lessig</b> and <b>Eric Eldred</b> in response to the need for a license between copyright and public domain.
<b>First Release of CCL (Version 1.0)</b>	<b>16 Dec 2002</b>	Official release of the first version of <b>Creative Commons License</b> .
<b>Eldred v. Ashcroft</b>	<b>2003</b>	The <b>U.S. Supreme Court</b> ruled in favor of the <b>Copyright Term Extension Act</b> , sparking the creation of Creative Commons.
<b>License Porting</b>	<b>July 2011</b>	<b>Creative Commons</b> licenses were ported to over <b>50 jurisdictions worldwide</b> to accommodate different legal systems.

## Types of CC Licences

License name	Abbreviation	Icon
Attribution	CC BY	
Attribution-ShareAlike	CC BY-SA	
Attribution-NonCommercial	CC BY-NC	
Attribution-NonCommercial-ShareAlike	CC BY-NC-SA	
Attribution-NoDerivatives	CC BY-ND	
Attribution-NonCommercial-NoDerivatives	CC BY-NC-ND	

## Zero, public domain "CC0"

Tool name	Abbreviation	Icon
"No Rights Reserved"	CC0	

## Open Knowledge Foundation (OKF)

Attribute	Details
Abbreviation	OKF
Formation	20 May 2004
Founder	Rufus Pollock
Type	Nonprofit organisation
Focus	Open knowledge (open access, open content, open science, open data)
Area served	International
Key People	Rufus Pollock, Renata Ávila Pinto (CEO)
Website	<a href="http://okfn.org">okfn.org</a>
CEO Timeline	Renata Ávila Pinto (CEO since October 2021); Catherine Stihler (CEO from Feb 2019 - Aug 2020); Pavel Richter (CEO from 2015–2017)
Network (as of 2018)	11 official chapters, 38 groups in different countries
Notable Projects	Lobbying Transparency, Open Access, Open Bibliography, Open Definition, Open Design & Hardware, Open Development, Open Economics, Open Education, OpenGLAM, Open Government Data, Open Humanities, Open Linguistics, Open Product Data, Open Science, OpenSpending, Open Sustainability, Open Transport, Personal Data and Privacy, Public Domain

*Open Knowledge Foundation also supports Apps for Europe, and D-CENT, a European project created to share and organise data from seven countries, which ran from October 2013 to May 2016*

## World Summit on the Information Society (WSIS)

Attribute	Details
<b>Formation</b>	2003 (Geneva) and 2005 (Tunis)
<b>Key Aim</b>	Bridging the global digital divide between rich and poor countries by improving internet access in developing nations.
<b>WSIS+10 Process</b>	Marked the 10-year milestone of the 2005 Summit, culminating with a High-Level meeting at the UN in December 2015.
<b>World Information Society Day</b>	Established on 17 May.

## *ICANN*

Year	Event
<b>1998</b>	ICANN is incorporated in California on September 30. Esther Dyson is appointed as the founding chairwoman.
<b>2000</b>	Professor Michael Froomkin argues that ICANN's relationship with the U.S. Department of Commerce is illegal.
<b>2006</b>	The U.S. government renews ICANN's contract for IANA functions for an additional 1-5 years.
<b>2009</b>	The DOC reaffirms its oversight role over ICANN while also allowing for some international oversight.
<b>2010</b>	ICANN adopts the motto "One World. One Internet" in its annual reports.
<b>2016</b>	ICANN transitions away from U.S. government oversight, with the IANA functions formally transitioned to the global multistakeholder community on October 1.
<b>2019</b>	Kurt Erik Lindqvist is appointed CEO of ICANN.
<b>2024</b>	Kurt Erik Lindqvist announces as the new CEO of ICANN, set to take office on December 5, 2024.

Thanks for Reading!

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